DOCUMENT RESUME

ED 160 010 HE 010 476

AUTHOR Keister, Stephen D.
TITLE A Recommendation for Computerization of Student Records in the Graduate School of the University of Toledo, as Determined by Perceived Needs in Student Records Efficiency, Requisites in Program Development Planning, and in Terms of Administrative Commitment Capability.
PUB DATE Aug 78
NOTE 99p.; Master's thesis for the Master of Science degree in Library and Information Services, University of Toledo

EDRS PRICE MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS *Academic Records; Administrative Change; *Computer Oriented Programs; Computer Programs; Cost Effectiveness; Economic Factors; *Electronic Data Processing; Grades (Scholastic); Graduate Study; Higher Education; *Information Retrieval; Masters Theses; Program Development; *Recordkeeping; Staff Utilization; *Student Records; University Administration
IDENTIFIERS *University of Toledo OH

ABSTRACT

A recommendation is made for computerization of student records in the Graduate School of the University of Toledo, because of insufficient space for record storage, clumsy retrieval methods, difficult interfiling methods, long waits for grade and credit-hour updates, lack of staff time for attention to recordkeeping, and costly and ineffective interim solutions. Justification is given for the cost effectiveness of a computerized system, with consideration given to existing computer systems in other areas and outlays for similar systems in other Ohio institutions. Continuing, sound, and exacting evaluation is recommended, with a view to these requirements and objectives: (1) maintenance of academic quality or improvement of standards; (2) preparing for and facilitating accreditation review; (3) ensuring program viability in terms of faculty, administrative, and student support; (4) comparison of the programs to similar programs elsewhere; (5) determining adequacy of administrative commitment; (6) justification of budgetary outlay; (7) program development needs, in terms of financial and human benefit; (8) ultimate utility of such a program; (9) justification to extra-institutional persons or bodies; and (10) usefulness in the reassessment or determination of mission and policies. (Author/MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED160010

SCOPE OF INTEREST NOTICE
The ERIC Facility has assigned this document for processing to: HE IR
In our judgement, this document is also of interest to the clearinghouses noted to the right. Indexing should reflect their special points of view.

A Thesis

entitled

A Recommendation for Computerization of Student Records in the Graduate School of the University of Toledo, as Determined by Perceived Needs in Student Records Efficiency, Requisites in Program Development Planning, and in Terms of Administrative Commitment Capability

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

by
Stephen D. Keister

as partial fulfillment of the requirements of the Master of Science Degree in Library and Information Services

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Stephen D. Keister
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Adviser

Acting Dean of the Graduate School

The University of Toledo
August 1978

HE 010 476

ABSTRACT

This Community Information Services master's thesis makes recommendation for computerization of student records in the Graduate School of the University of Toledo. The proposal proceeds pursuant to the premise that accurate, comprehensive data and information are primary requisites for meaningful policy formulation and consistent planning effort in higher education administration.

The more pressing organizational problems in the Graduate School student records system include: (1) insufficient space for proper student record storage; (2) clumsy student record retrieval methods; (3) similarly difficult methods of interfiling; (4) computer grade and credit-hour updates take too long through the University's Computer Center, and computer updates are not available to the Graduate School on students who are not scheduled to continue course work the following term; (5) duties of staff other than those related to student records preclude the amount of attention warranted to student file updating, maintainance, and evaluation; (6) interim organizational information systems would serve only selected aspects of total needs, and cost outlay for an interim measure should be viewed as highly suspect; and (7)increasing demands on staff have forced suspension of several student service practices.

The writer seeks to justify the cost-effectiveness of such a system, given: (1) the present extent of computerization in many areas of institutional operation--among the areas registration and grade reporting; and (2) indicated outlay of similar systems in state universities in Ohio. Innovative uses of such systems are noted, as are such areas of concern as security, centralization, computerization in the graduate application and admissions process, et. al.

Continuing, sound and exacting evaluation, of which student records accessibility plays a large part, is warranted, provided that institutional and disciplinary aims, ends and functions are clearly understood. In order to satisfy a number of institutional and program needs, certain requirements and objectives can be more efficiently met through ready access to student information: (1) assuring maintainance of academic quality, or as a means by which to attain higher academic standards; (2) preparing for and facilitating accreditation review; (3) ensuring program viability, in terms of administrative, faculty, and student support; (4) allowing comparison of any program to programs of similar nature elsewhere; (5) determining whether administrative commitment to program development has been adequate; (6) allowing for justification in budgetary out-

lay; (7) assisting in determination of program development needs, in terms of financial and human benefit; (8) allowing for determination of the ultimate utility of a program, relating to interdisciplinary, institutional, and extra-institutional effect; (9) offering evidence of accomplishment to extra-institutional persons or bodies who wish justification for past or present efforts, and for future direction; and (10) to further aid in determination or reassessment of mission, policies, objectives and goals, so that self-knowledge may be present for unified institutional function.

Central to proper use of available information is the presence of proper groundwork for efforts in institutional, program, and individual review. Just as evaluation can aid in clarification of objectives, goals, policies and procedures, so evaluation cannot proceed fairly without a meaningful and understood educational base. In order that institutional, program and individual assessment may be equitable and fair, it is necessary that there exist a clear definition of institutional and disciplinary function; otherwise, evaluation shall necessarily be defective and unjust, and appear to be arbitrary in treatment. It is obligatory that institutions which have not done so move beyond ambiguity in statements of purpose, to more adequately discern priorities in concern for the institution as a complex and interdependent entirety.

ACKNOWLEDMENTS

Obligations in the researching and writing of this thesis have accumulated significantly over the past several months. Debts are owed to those individuals who gave a few moments for reflection and expression of needs in various aspects of information efficiency in the university and in the larger community.

Special thanks are in order to two individuals. Dr. Angelo Wallace served as advisor throughout the curriculum, giving freely of time, suggestions, and patience. Dr. Wallace formally kindled my interest in study of higher education through insights both extensive and diverse. Dr. David G. Barry, as Dean of the Graduate School at the University of Toledo, gave freely of insights and suggestions, and proved to be readily accessible to inquiry or discussion, although his schedule rarely permitted much time for matters other than the constant attention to conferences, committee sessions, routine business, etc. Dr. Barry now serves as Provost of Antioch College.

Additionally, thanks should be given to all faculty and students in the Department of Library and Information Services for their cooperation in learning and their kindness during the preceding year.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS ii

Chapter

I. INTRODUCTION AND STATEMENT OF NEED 1

DATA, INFORMATION, AND THE CHALLENGE OF ACCOUNTABILITY. 1

IN CONTEXT: THE INSTITUTION, ACCOUNTABILITY, AND ACCESS TO INFORMATION. 2

THE TASK DEFINED 9

II. INFORMATION AND PRESSURES: PROBLEMS AND PROSPECTS 12

THE DEAN OF THE GRADUATE SCHOOL AND ACCESS TO INFORMATION. 12

CONCEPTS IN QUALITY PERFORMANCE EVALUATION 21

EXAMPLES OF QUALITY PERFORMANCE EVALUATION 22

METHODS IN AND FUNCTIONS OF PROGRAM EVALUATION 31

PROCEDURAL CONCERNS IN EVALUATION EFFICIENCY. 36

ASPECTS OF INFORMATION AND INFORMATION GENERATION/DISSEMINATION AS AN ORGANIZATIONAL AND EXTRA-ORGANIZATIONAL PROCEDURE. 47

III. THE UNIVERSITY OF TOLEDO GRADUATE DEAN, INFORMATIONAL IMPERATIVES, AND ADMINISTRATIVE COMMITMENT TO SELF-EVALUATION. . . 53

IV. THE COMPUTERIZED STUDENT RECORD SYSTEM . . . 59

ORGANIZATIONAL PROBLEMS IN THE GRADUATE SCHOOL STUDENT RECORD SYSTEM 59

CONCERNS IN IMPLEMENTATION OF COMPUTERIZATION 61

EXAMPLES OF COMPUTERIZED STUDENT RECORD SYSTEMS 64

V. EVALUATION AND PROPOSALS. 75

FOOTNOTES. 81

BIBLIOGRAPHY 88

CHAPTER I

INTRODUCTION AND STATEMENT OF NEED

DATA, INFORMATION, AND THE CHALLENGE OF ACCOUNTABILITY.

Efficient information systems are needed for collection and analyzing of data concerning academic programs, staff (administration as well as faculty), and student performance. Without a reliable information system, needed data can not be provided, and administrative decisions shall be either ineffective or suspect. That any deliberative concern influencing institutional operation should be expected to be both (a) a highly intelligent decision, and (b) fair to all parties concerned, is not an unreasonable request. However, noone can reasonably expect correct and acceptable assessment without (a) sufficient information on those aspects under consideration, and (b) clearly delineated and acceptable mission, policies and criteria, as a basis for scope and method in evaluation and judgement.

Colleges and universities can not reasonably afford to overlook the challenge of accountability. Well-defined, systematic planning and evaluation is necessary for institutional identity, direction, quality-control, and in forming goals and objectives. Beyond that, however, there is need for a continuous evaluative effort in order to verify educational credibility to extra-institutional persons and bodies. Because some segments of the public may find it expedient, for whatever reasons, to utilize the vagueness of accountability

to limit institutional financial viability and program efforts, colleges and universities must undertake strict and demanding self-evaluation, knowing for what purposes the evaluation has been undertaken.

There is a great deal of literature emerging on accountability in higher education. The term accountability often carries a vague, and thus threatening connotation. Unfortunately, many institutions have no continuing self-evaluation process proceeding from established institutional mission and long-standing program development efforts. Hence, calls for accountability often initiate a hectic (and sometimes frantic) mobilization of energy, with results that are only marginally useful, usually methodologically questionable, and both superficial and protective.

IN CONTEXT: THE INSTITUTION, ACCOUNTABILITY, AND ACCESS TO INFORMATION.

Based on a review of recent literature, the writer's opinion is that too little attention is given to the need for continuing planning and evaluation as a necessary method of ensuring that reasonable levels of knowledge and learning may be assured. Awareness of colleges and universities as self-perpetuating entities seems to be common opinion in large segments of the public; to refute that notion (or to assure that such a situation does not become reality), critical awareness by members of the institutional body seems warranted.

In The International Encyclopedia of Higher Education, W. M. Sibley articulated principal social, political and economic circumstances leading to the rise in demand for accountability in higher education:

> Educational institutions are by no means alone in facing the charge of failure to respond to the mandate of accountability. Since the mid-1960s there has occurred a marked erosion of confidence in traditional authorities and in the functioning of a wide array of social, political, and economic institutions. Older forms of value consensus have dissolved, and adversarial and litigious relationships have become more prevalent, as the legitimacy of institutions and of their leaders increasingly has been challenged. Conflicts of various kinds have escalated to the point where traditional mechanisms for conflict resolution are no longer able to mute or to contain disputes within acceptable bounds. The unreasonably high expectations of the 1960s, as to what could be achieved by educational and other major national institutions, have not been realized. In addition, by virtue of their greatly expended claims on the public purse, colleges and universities have lost the "low profile" which they formerly enjoyed. All of these trends have generated a deep malaise; and the cry of accountability is in large part an expression of this malaise, a voicing of disenchantment with the performance and potentialities of existing institutional forms.
>
> The demand for accountability also has gained impetus through pressures for greater participation in decision making, whether by workers in industrial firms, citizens in governmental affairs, or students and academic staff in the governance of educational institutions. In significant measure this trend toward "participatory democracy" also has been directed toward the imposing of more stringent limitations on the discretionary powers of officeholders, or of devising what are deemed to be more effective sanctions forcing such individuals to fulfill their particular obligations. To some degree the cry for accountability functions as "an instrument of persuasion" [Bowen, H.R. "Holding Colleges Account-

> able," Chronicle of Higher Education, April 23, 1973, pp. 7, 28.], sometimes almost as a club, to ensure compliance with popular social or governmental aims. Hence, as Etzioni [Etzioni, A., "Alternative Conceptions of Accountability: The Example of Health Administration," Public Administration Review (May-June, 1975), pp. 279-286.] has remarked, its contemporary use is highly "symbolic." Sociologically, the call for accountability often functions as a hortatory political slogan or as a "cue word" to mobilize followers in some cause. Its use has thus become strongly emotive, a mode of employment of the term rendered easier by the fact that in current polemic its cognitive content is frequently minimal.
>
> No dispassionate observer of the educational scene would wish to claim that institutions of higher education are not in need of reform or that they should be exempt from all criticism. Undiscriminating attack on these institutions, however, or unreasonable expectations as to their capacity within existing resources to discharge the formidable tasks being laid upon them, may well destroy fragile institutional forms and values. Yet, in the name of accountability, colleges and universities are being summoned not only to discharge their traditional functions but to assume even greater responsibilities. They are exhorted, for instance, to achieve higher productivity, to attain greater efficiency, to get on with the job of measuring educational outcomes, to be more relevant, to develop new forms of continuing education, to be more open and accessible (especially to disadvantaged minorities), to strive for flexibility and abandon rigidity, and to accomplish all these goals while at the same time implementing more and more participatory systems of management and governance. The weight of all these demands may be so heavy as to subject colleges and universities to a stress beyond their capacity to repair. In consequence, efforts must be made to separate legitimate demands from those which are illegitimate and unreasonable.[1]

In University Planning and Management, Geoffrey Lockwood expressed concerns in the growing complexity and challenges to the management of universities in terms of the needed knowledge and appreciation of appropriate institutional function. Addressed were a myriad of complex and interdependent

matters: the question in role of the university necessitating serious discussion in order to allow for articulation of institutional purpose and long-term objectives; the severe rise in numbers of students attending institutions of higher education having forced those institutions to reason objectives and goals generally, and specifically in both institutional and extra-institutional terms; the increasing portions of national budgets being allocated to higher education producing extended need for implementation of effective planning and accountability in institutional and program effort; awareness of the institution in its position as a part of a coordinated system of higher education compelling internal planning and exacting evaluation, and in checking of data and performance against that available from other institutions; responding to internal and external demands for curricular revision, particularly as related to "relevance" in curriculum design; an increasingly competitive situation in the scramble for funding for research in the universities; and, a multiplicity of new issues in unionization of faculty and staff, in the advent of collective bargaining, labor utilization and productivity, et. al.[2]

Such demands on institutional administration create the need for highly efficient and skilled response, with continuing consideration to be given to cultivation of sophistication in institutional planning, management, and evaluation techniques:

> ...the main aim of most management techniques is to make decision-makers aware of the alternatives open to them and the implications of those alternatives. The undoubted fact that fewer implications can be quantified in an educational institution than in most other forms of organisations detracts from the theoretical rigour with which certain techniques

> can be used, but it does not detract from the practical utility of those techniques when used by people who understand the nature of a university. It cannot be overstressed that it is the systematic approach which brings the main benefit and which is open to all institutions. There are no packages of easily transferable techniques; each institution can learn from the experience of others but the particular techniques need very careful study before being adapted by an institution. Such techniques and sub-systems need to form part of the institution's overall approach to management.3

The December, 1966 American Association of University Professors "Statement on Government of Colleges and Universities" sought to direct a means by which desirable and competent institutional cooperative action would be evidenced through specification of responsibilities and tasks. While making note of the variance in prescribed duties for any position among institutions, general statements were presented on several institutional areas, with proper consideration given to extra-institutional pressures, concerns, and influences:

(1) The complex organization of colleges and universities creates an institutional interdependence, such that joint effort among the various sectors is necessary for adequate measures of planning and service. Integral to the development of institutional stability is a cooperative, continuing effort in designing, maintaining, and revising long-range plans. To that end, channels of communication within the college or university should be available (in both human and organizational-mechanical terms) and used freely, so that decision-making may be acceptable and effective through maximized use of informational resources;

(2) The governing board has a unique responsibility, and

a unique position allowing broad and impartial overview (although board members may be constrained by political actions or by regulation limitations in the institutional charter). Judgement should be consistent with institutional policy; informational needs for study should be requested by the governing board, as is necessary;

(3) In meeting the growing demands of the position, the office of the college or university president requires that methods in informational inquiry and collection to best affect needed change be available. In duties of organization, direction, and representation, the president's responsibilities make it imperative that his or her office be centrally located and accessible for articulation of institutional concerns;

(4) The many responsibilities of college and university faculty require that there be sustained efforts at open communication by way of several routine informational arrangements; through circulation of memoranda and reports by faculty and administrative committees; by means of distribution of findings and recommendations of any ad hoc committees; through wide dissemination of expressed needs and concerns of standing liason committees; by way of active participation by faculty members in addressing administrative concerns; and, by means of faculty representation in and concern for input into governing board concerns; and

(5) While limitations on in-put toward decision-making by the student body should be somewhat limited (given inexperience, a transitory status, preeminent responsibilities in administrative concerns by other experts of the institution, et. al.),

the benefits of student concern should be acknowledged. Freedom from abridgement of input of student opinion should be guaranteed.[4]

In his address to the twenty-sixth annual meeting of the Midwest Conference on Graduate Study and Research, Robert MacVicar spoke of the need for and service performed by continuing evaluation, particularly in new, emerging and/or more innovative graduate curriculums:

> ...Innovation in any area without subsequent evaluation is "flying blind." We achieve some satisfactory achievements but we may not be aware that we have done so. We may in our efforts to innovate make serious mistakes and be actually decreasing the quality of our program but not aware until later than we would hope. If we are to have innovations which are truly experimental they will have to be subject to the kind of rigor of both planning execution and evaluation that such a word denotes.
>
> Let me remind you that evaluation is difficult. To plan how to do it is not always easy and to carry it out is often boring and not easy to achieve. Evaluation is expensive. Quality control does not come easily. Time and effort must be expended and this time and effort equates to, in many instances, substantial sums of money. But most important, evaluation is threatening. As long as we think innovation is something that is a positive good simply because we are doing something different we don't have to worry too much about someone coming up behind us and pointing out that we are headed in a downward spiral rather than an upward one. The minute we begin to evaluate, this happy situation disappears and the reluctance to engage in innovation is heightened very substantially. With all of the barriers that exist now, this is not necessarily desirable but the alternative of inadequate evaluation is even less pleasant to contemplate.[5]

THE TASK DEFINED.

It is clear, then, that if effective evaluation is to be realized, then effective planning must precede, that requiring a well-defined, detailed and identifiable self-knowledge. Information is necessary if administrators and faculty are to specify program objectives and formulate criteria for subsequent assessment of objectives. Program assessment should be accepted as a part of the normal procedure of program operation, rather than as a sudden, and often seemingly arbitrary, administrative or extra-institutionally imposed project. The key to successful institutional and program assessment is the people who are intimately involved in the procedures in evaluation. Poor evaluation is worse than no evaluation. That defective methodologies are being used is not, however, a logical case against institutional and program evaluation; rather, such difficulties command responsibility for more study and greater involvement throughout each community of higher learning.

It seems that institutional research and evaluation is an extra duty, and often a burden to those involved--except for those specifically appointed for such duty. Unfortunately, there is little recognition of the evaluative examinations by those who give their time to such effort through committee assignment or through voluntary action. Perhaps this is one reason for the lack of a developed and sophisticated methodological efficiency; this type of research, given other pressing demands, just "doesn't pay." Perhaps, as extra-institutional demands for accountability increase, so will participation in and recognition of such effort.

Original inquiry was in discerning a better way to organize and control information in the University of Toledo Graduate School student record system. As was necessary, research and inquiry into areas related to the student records system was encouraged. Graduate Dean David G. Barry made possible access to the student records system and viewing of the overall functions of that office. Further, Dr. Barry stressed freedom to make inquiry when and where deemed necessary, and to make appropriate suggestions at the conclusion of the study. During his tenure as Dean of the Graduate School, Dr. Barry had continually stressed that sound and inclusive information is the first essential in policy development and effective decision-making, that ready access to the graduate student record system, individually and collectively, would considerably aid in evaluative efforts for increased planning efficiency. He also stressed the obligation of the Graduate School to review the records of students individually, so as to better aid in detection of difficulties and to be able to "track" each student through the graduate program. Lack of organizational efficiency and a lack of time made such efforts impossible.

An overview of the present situation produced a number of glaring weaknesses and needs in student record organization. Problems in updating, maintainance, and retrieval of student information are immediately evident. Clerical duties force Graduate School staff to overextend themselves. The multiplicity of duties can not be met adequately, even though attention to demands seems present. Several student-oriented practices (e.g., updated notification to students of admissions status,

PR's [work-in-progress grades] and Incompletes) have been suspended due to lack of time, and because of inadequate organizational methods. "Tracking" is made difficult because of a high number of transient, "on-again, off-again" and part-time students.

Given the limited number of office staff and given that increased efficiency in efforts aimed at graduate students and graduate education must be realized in order that the University of Toledo should remain competitive in offerings and services with other universities in the general proximity of Toledo and throughout the system of public-supported universities in Ohio, it is recommended that there be a computerization of student records. The writer intends to justify such an operation in the following pages, in terms of: (1) application of such data to needed planning and evaluation; (2) increased efficiency in Graduate School information procedure, with direct relation to (1); and (3) computerization of student records as cost-effective (given the present extent of computerization in registration, grade reporting, et. al.), if designed properly, and instituted and maintained competently.

CHAPTER II

INFORMATION AND PRESSURES: PROBLEMS AND PROSPECTS

THE DEAN OF THE GRADUATE SCHOOL AND ACCESS TO INFORMATION.

The centrality of the graduate dean, and of the graduate school, provides a position for overview of institutional imperatives, a nucleus from which cooperative accomplishment may be evidenced. The office of the graduate school can provide the university with a number of services: it can act to coordinate faculty concerns; it can make competition, if not cooperative, at least mutually intelligible; it can act as a logical medium between administrative hierarchy and faculty, in promotion of communication; it can aid to ensure quality academic offerings on the graduate level; it can note achievements and needs of students.

Victor E. Hanseli characterized the role of the dean as follows:

> Taking irony for what it is--a figure of speech, but not a predication--we could argue that, far from being expendable, the dean is the ideal "creature" to assume educational leadership in "the scheme of things." His office is situated in the heart of the academic microcosm. If his role is properly understood by all, including himself, he is in a better position than anyone else to assure its vitality. Moreover, his actual or potential contributions to the life of his college or university are such that they directly concern the major problems confronting higher education today.[6]

Because graduate programs most often provide basic, critical advertising for any institution (as opposed to less recognized undergraduate curriculums), the position of the graduate dean assumes a more important role than is usually granted

in typical organizational patterns. The need for effective administration in the office of the graduate dean will probably increase as does the dependence on support from governments, private foundations, and individuals.[7]

The changing role of administration in higher education has placed increasing responsibility for institutional decision-making on the academic dean (and, by analogous circumstance, the graduate dean). His or her duties require "patience, good judgement, and familiarity with the workings of academic communication." Essential to the role of the academic dean is to be ever aware of the tendency toward divergence of personal objectives and institutional objectives, and to be able to reconcile conflict in such a situation by virtue of the good judgement, the patience, and the familiarity in academic communication.[8] It is precisely because of the increasing responsibility for institutional decision-making that the office of the academic dean now oversees, to an ever greater extent, educational programming and institutional development.[9]

The role of the graduate dean is neither well understood, nor the subject of much formal inquiry. The amount of literature available on the subject is minimal, and, due to the variance in responsibilities and duties from university to university, literature tends to be general and often lacking in usefulness.

Traditionally, the duties of the graduate dean have consisted of advancing learning and promoting research at the graduate level. He or she was usually chosen because of an ability to work with and to lead university faculty. He or

she has most often emerged from the faculty, upward from professor to department chairman to graduate dean of a university.[10]

Hodges and Hodges wrote of Joseph P. Arnold's irreverent, tongue-in-cheek statement that "without authority, faculty, or budget" the graduate dean must "operate through the influence of his charismatic personality and intellectual distinction or simply by patience and low cunning."[11] While this is purposely overstating the issue, the message is clear that sustained leadership is ever difficult when policies and priorities are forwarded in a highly personal and political setting where there exist diverse philosophies and interests.

The graduate dean can be in an uncomfortable position as an intermediary between the faculty and the administrative hierarchy. He or she is expected to function in accordance with policies and procedures of the university hierarchy while advancing programs (and their functions) acceptable to the various colleges and departments. Evidence of conflict in aim is strikingly evident to the graduate dean.[12]

The role of the dean of the graduate school is "one highly fraught with ambiguities." It is in his position as intermediary that "Many times without the power to carry out these responsibilities, he must answer for curriculum and instruction, evaluation, fiscal responsibility, legislative influence and authority, program planning and facilities, public relations and liason, research and development, staff development and improvement, and student affairs." This clearly points to the difficult and often ill-defined situation of the graduate dean in an ever changing environment. In 1964, John Wesley Gould

wrote:

> In the past year or two, more of the large college academic dean's [again, through similar circumstance, we may theorize the graduate dean's] time has been devoted to making reports to foundations, the government, and other agencies than used to be; to participating in extra-institutional academic activities out of a sense of institutional or professional obligation; and to solving problems arising out of government-sponsored research, or rather out of the effect which the availability of funds for research in some areas has on people whose interests lie in areas not so blessed with financial ability. He believes that the time devoted to such things as these could more profitably be spent in talking informally with his faculty colleagues and students; visiting faculty members in their offices, where they are more at home and apt to talk more freely about their scholarly pursuits; paying visits to other colleges in search of new ideas and better ways to do things; reading deeply in one's field and other fields; and, perhaps more necessary than the rest, taking time to reflect on the nature of his job and his part in helping to determine the direction in which the college is moving. There is too little time for important things and, in one-third of the cases, too little time even for a week of vacation during the year. In this regard, the academic dean of the large college is very defintely his small college dean's brother.[14]

Dr. R. E. Porreco, speaking at the tenth annual meeting of the Council of Graduate Schools in the United States, rejected the notion that the graduate dean need be a premier politician. Rather, the typical graduate dean is interested in exercising sound leadership at a time of financial austerity and reconsideration of the very nature of graduate education. Dr. Porreco summarized five "developments and tendencies" that he perceived in graduate education:

> (1) An overreaction to the Ph.D. pinch or glut or whatever it is, such that graduate programs are being indiscriminately condemned for producing unemployables.
> (2) The development of university budget com-

> mittees without decanal [ie., without representation by the graduate dean] and with little faculty participation.
>
> (3) As more emphasis is placed on undergraduate education, graduate schools will be hard pressed to hold their own or, what may be in better order, to stage an orderly retreat.
>
> (4) The departmental structure which is or has been the basis of graduate education as it now exists is softened by increasing emphasis on undergraduate schools and their programs.
>
> (5) As officers of institutional research develop and become more sophisticated and more emphasis is placed on systems analysis and cost accounting, there will be more pressures on graduate schools to justify programs, especially in the natural sciences, of course, where there are large research components.[15]

At the annual meeting of the Midwest Conference on Graduate Study and Research in March 1971, David R. Deener noted the difficulty for the graduate dean faced with an austerity budget and with the certain eventuality of (either relatively-speaking or in real terms) decline in funding available for program development and viability:

> When all is said and done . . . facts as to costs and indices as to benefits will not in themselves make decisions. It will have to be an act of human will and judgement. When an institution reaches the stage of massive pruning, it will likely have to choose between two broad courses of further development: whether to continue to try to support a large number of graduate programs at a progressively deteriorating level of quality and operation, or to eliminate a number of programs and attempt in this way to garner resources to maintain quality and operation of those departments left. Whichever course is followed, the graduate dean must be prepared for howls of outrage and enrage from faculty, students, alumni, professional associations, and a host of others who will feel that their vital interests have been threatened.
>
> . . . a sound approach to program improvement may be the only way to avoid the pangs of pruning. Unfortunately, the only certain way of assuring program improvement is to require the highest standards for appointment to the graduate faculty, for promotion, and above all, for

> acquisition of faculty tenure. In the post World War II era of great expansion at the graduate level, developing institutions generally found it very difficult, and perhaps in a sense unnecessary, to think about such standards. An institution's capacity to pay high faculty salaries was more determinate. In the 1970s, on the other hand, attempts to institute higher standards are likely to crash head-on with faculty desires, understandable desires to be sure, for job security. And this may be the decisive confrontation after all. Insistence upon program improvement if it involves faculty tenure may simply result in a new order of faculty-administration relationship based on collective bargaining. Then it's a new ball game; instead of the turn of the cycle, it will be the turn of the screw.[16]

Certainly, the dean who said that he was "simply the middleman between the chairmen of departments and the chancellor of the university"[17] was not typical (nor accurate), but probably did echo a distinct frustration common to the nature of the position.

It has, traditionally, not been the sole, principal duty of the academic dean to concern himself or herself with faculty concerns. Changes since 1945 have rapidly and drastically altered the nature of the position.[18]

In 1933, primary duties included: interviewing students regarding academic matters; corresponding with parents; supervising the curriculum; interviewing applicants; aiding in assessment of faculty abilities; reviewing academic and scholarly work of faculty and students; improving instruction; and, working with department heads on proposed course changes.[19]

In 1946, a study showed dramatic change. The position was more supervisory in relation to admissions, registration, discipline, and counseling. Many institutions, particularly the larger ones, had relocated several of these functions from

jurisdiction of the dean's office.[20]

And, by the early 1960's, principal responsibilities included routine administrative duties (e.g., correspondence, scheduling, catalogue revision, academic reports, questionaires); dealing with faculty concerns; academic/institutional committee work; recruiting of faculty; student counseling; curriculum revision and design; promotions; and personnel evaluation.[21]

Expectations of academic deans, graduate deans, and other administrators by faculty vary considerably from institution to institution, are usually increased significantly in times of financial austerity, are subject to the current political climate (both institutional and extra-institutional), are occasionally influenced by student opinion, and are subject to various intra-institutional personal relationships.

Generally, however, it is possible to list broad expectations of deans by faculty and other institutional administrators: (1) <u>educational leadership</u>, responding to goal-setting and affecting change in the academic unit, when and where necessary; (2) <u>decision-making</u> on a fair and informed basis; (3) securing and allocating <u>budget resources</u> for adequate functioning of each institutionally supported academic unit; (4) <u>communication</u> with faculty, as effectively and as openly as possible; (5) <u>participatory governance</u>, allowing for (as prescribed in institutional guidelines) faculty input and decision-making in concerns relative to educational programming; (6) protection from external threat(s), usually referring to

any infringement on faculty academic freedom; and (7) performance of routine operations efficiently, such as delegation of assignments, providing for needed and useful information to academic departments, dealing wisely with the promotion of effective (or, at least workable) interrelationships, and processing expediently mail and telephone business, and other day-to-day concerns.[22]

The change in emphasis from the student to the faculty need not necessarily be bad, provided that students are offered commensurate services elsewhere. What is significant in the changing role of the dean is that, if given a range of duties such as those presented herein, the opportunity of that individual to have significant impact on the more critical issues of the university is today greater than ever before. Providing that the potential of and responsibility for institutional leadership is present, then it necessarily follows that the resources for implementation of substantive function be made readily available.

Speaking before the 1972 conference of the Midwestern Association of Graduate Schools, Norman H. Cohn emphasized this centrality of the office of the graduate dean in terms of contribution to institutional function:

> . . . the graduate dean is the most sensitive of all of the deans at an institution since he has an even greater responsibility to be non-administrative in the eyes of the faculty. His credibility as a spokesman for the faculty is essential and he must do as much as possible to prevent the widening gap between faculty and administration.[23]

The effectiveness of the graduate dean depends on a compre-

hensive knowledge of purpose in higher education, as well as a sound understanding of his or her institution. However, to be able to effectively apply theory to a particular circumstance in the institution takes not only an authoritative knowledge of the educational process, but also the necessary means to influence the realization of excellence in planning, goal-setting, and policy-making.[24]

In April of 1970, Robert MacVicar said that--due to prevailing circumstances--many graduate deans tend to approach their positions negatively. Without a handle on finances, frustration and defensiveness often result. The sometimes distraught emotional state, aggravated by meaningless and routine tasks, tends to unnecessarily decrease the efficiency of a supposedly learned and analytical office. Needed is increased freedom from the excessive number of routine tasks and greater general support from the institution, such that more attention and consideration could be given to substantive issues--such as long-term planning through evaluation, and policy-making--in graduate education.[25]

"It is the business of the dean to know all about the academic life of his institution, so that, through his leadership, he can leave his imprint upon it."[26] Information (hence, a limit on misinformation) to provide the graduate dean with a comprehensive overview is obligatory if he or she is to provide fair and equitable judgement.

The dean can not, of course, claim sole responsibility for implementation of innovative and challenging academic programs (e.g., curriculum revision, independent study expansion,

and improvement of working conditions for faculty), but deans--through self-study and comparison with other institutional policies--have been in large part responsible for innovation and change through evaluation of student, faculty, and administrative needs, claims, and actions, as related to institutional objectives.[27]

CONCEPTS IN QUALITY PERFORMANCE EVALUATION.

Dr. John D. Millet, former president of Miami University and Chancellor Emeritus of the Ohio Board of Regents, presented eleven concepts in college and university quality performance evaluation. All concepts have relation to institutional and program quality; similarly, all have relation to the aquisition of sufficient information for assessment of existing strengths and needs in program development:

> (1) The college or university enterprise has an obligation to evaluate its performance and to report such evaluation as an expression of its social accountability.
> (2) A carefully devised information system is essential to evaluation of performance.
> (3) Evaluation of performance depends upon the development of criteria or standards of performance. These criteria include achievement of formulated purposes, the satisfaction of external interests in the enterprise, program effectiveness, program efficiency, continued viability of the enterprise, and commitment to rationality in decision-making and work performance.
> (4) Achievement of formulated purposes involves assessment of actual accomplishments in terms of basic ends.
> (5) Satisfaction of external interests involves identification of the social goals of the enterprise and of the extent to which external interests indicate their perception of satisfactory performance.
> (6) Program effectiveness involves the calculation of the extent to which a particular production technology at a particular cost has achieved desired purposes compared with alternative available production technologies and costs.

(7) Program efficiency involves the calculation of the extent to which a particular production technology has achieved desired outputs with the least possible consumption of required inputs.

(8) Continued viability of the enterprise involves evidence of social satisfaction and of internal satisfaction with work performance in terms of sufficient income to meet necessary costs.

(9) Commitment to rationality in decision-making and work performance involves that the college or university enterprise does in fact endeavor to achieve accomodation of available knowledge, intellectual competence, and consistency of behavior with the interests and desires of those internal and external groups concerned with the enterprise.

(10) Evaluation of performance is the prerequisite to accountability of the college or university enterprise. Accountability requires the enterprise to provide interested publics with the evaluation of its performance and to demonstrate the extent to which performance justifies continued social acceptance.

(11) The college or university enterprise may or may not practice evaluation of performance on a desirable scale and may or may not acknowledge the essential requirement of social accountability.[28]

EXAMPLES OF QUALITY PERFORMANCE EVALUATION.

Selected examples of criteria used in program evaluation follow.

The University of Maryland undertakes review of graduate program quality on a regular basis; each department is reviewed every five years. Among criteria involved in program quality assessment are: numbers of faculty and students; faculty salaries compared to those elsewhere in the same field; percentage of students awarded financial aid; extent of attrition from the program; and, career marketability for graduates.[29]

The "Five Year Reviews" at Maryland were established through the University's Graduate Council. That body is responsible for conducting the reviews, for making procedural arrangements,

and for providing suggestions pursuant to program review. In addition to assessment of program quality for purposes of modification in program development at Maryland, typical ends to review include:

> a) Results of reviews would provide departments with external advice and guidance in terms of new options or new directions that should be developed.
> b) The reviews could provide additional supporting evidence for adequacy of resources, e.g., library, space, equipment, operating budget, etc.
> c) The reviews could provide an opportunity to abandon or reduce areas of study within a program, e.g., what specific sub-specialties should be available in the Department of English or the Department of Zoology?
> d) The review procedure would make it more feasible and convenient to look at large related units of academic disciplines--rather than individual departments.
> e) The review would provide encouragement for development of or expansion of interdepartmental or transdisciplinary programs. The reviews would provide an opportunity to relate similar academic disciplines, e.g., Departments of Microbiology, Botany, Zoology, Animal and Plant Sciences as a total biological sciences enterprise at the University.
> f) Evidence might very likely be developed for coalitions between faculty groups leading to stronger programs.
> g) The facts as revealed by the review might make it difficult to justify the continuation of the program.[30]

Tulane University has suspended degree programs on the basis of four criteria: extent of involvement in the undergraduate curriculum; extent of involvement in the graduate program, as measured by enrollment; degrees awarded, and other standards; national recognition and reputation; and, providing that the program is not national, those resources necessary to promote a nationally viable program.[31]

Princeton employs eight major criteria in graduate program

assessment: the quality of faculty and program--as ascertained by others in the field, faculty in related areas, and students; the number of applicants, and the number and quality of acceptees and program graduates; the future viability of the discipline; the contribution of the program nationally, as compared to other programs in that field; any comparative advantage enjoyed by Princeton in the particular academic field; the extent of interaction with undergraduate education in that area; and, the overall cost of the program.[32]

John K. Major's suggested criteria include: significance of the program, in terms of impact on other fields, the future of that field, and the central role held in the arts and sciences; quality of the program, including quality of faculty--as judged by scholars both in the field and in other disciplines; quality of students--measured by admissions standards, educational backgrounds, and level of success in national testing programs; program quality--as demonstrated by national studies, opinions of scholars, rate of student attrition, and careers in which graduates are employed; solvency of a program, including internal efficiency and external support; and, lastly, need for program implementation and/or level of support for maintainance.[33]

Virginia evaluates the performance of its junior colleges and senior institutions bienially, using quantitative measures to indicate need for further institution and program review. Primary emphasis is placed on degree productivity over a five-year span, and total enrollment figures during that five-year

period. Should questions be raised, then qualitative review is initiated by the State.[34]

The Louisiana Board of Regents uses a formal evaluation procedure through which a number of doctoral programs have been terminated. The Board of Regents also awards programs "commendations of excellence" and recommendations for strengthening, where warranted. All terminated doctoral programs were otherwise duplicated in another Louisiana state-supported university. State guidelines guaranteed that no institution would suffer loss of funds for five years subsequent to program termination.[35]

The State University System of Florida has comprehensively reviewed state supported programs by subject area. Criteria used include program quality; priority of the program within the institution and within the State System; level of articulation with other programs; program administration and management; and, career implications. Results included placing a limit on level of undergraduate enrollment in education curricula (no program were eliminated) and arrangement of a consortium as a viable alternative to the creation of a new school of engineering.[36]

The State University of New York System undertook review of program accountability in its colleges and universities, with the proposal for increased emphasis on those aspects (specifically process and output) most often overlooked. Methodological confusion over correct processes involved in program evaluation of input, process, and output criteria created difficulties in implementation of evaluation, and have tended to

prohibit even preliminary assessment and free discussion of appropriate and acceptable criteria.[37]

It is hoped that the S.U.N.Y. System can benefit from the extending of criteria available for program assessment in viewing as a comprehensive aggregate the multiplicity of variables involved in those several areas in discerning quality, effectiveness, and efficiency of program effort. Following are criteria and variables in program assessment: quality and reputation of faculty; quality of students; adequacy of financial support for program maintainance, faculty, and students; adequacy of the physical plant for program needs; adequacy of library services for program support; availability and adequacy of computing services for any program; adequacy of media services and educational technology for program support; departmental support (clerical services per FTE faculty and student) judged as to access and adequacy of service; existence of quality programs in related disciplines to support program efforts; faculty workload; efficiency of program operation, as in cost per student, number of graduates per year, total cost to the student, et. al.; pedagogical methods and content; extent of program interaction with other institutional programs; faculty and student morale; extent and quality of faculty publications; extent and quality of student research; success of graduates (rate of placement, employer satisfaction, career records 5, 10, 15 years subsequently); educational outcomes (student growth through viewing of standardized testing and student satisfaction); and program vitality, in employment, in constancy of enrollment trends,

and success of graduates adapting to alternate career opportunities. A lengthy list of indicators--often a number for each criterion--are noted.[38]

Suggested criteria for program review, as articulated by the Education Commission of the States include: (1) the number of graduates from the program reviewed within each year for the preceeding five years; (2) the total number of students in a program (entry and rate of attrition); (3) class size and cost of courses identified as integral elements in the program; (4) cost per program graduate; (5) faculty work load; (6) program quality as reflected by regional and national reputation, qualifications of faculty, and success of program graduates; (7) total production of a program's graduates from all previous years; (8) financial and qualitative improvements to be achieved through (a) consolidation, or (b) elimination of the program; (9) level of student interest and demand trends for the program; and (10) the appropriateness of the program to a (changed) institutional role or mission.[39]

In formulation of criteria for academic program review, the Office of Academic Affairs at the University of Toledo has actively sought input by faculty and students. In June of 1975, responses on criteria priority were elicited from department chairpersons (140 responses, one elicited response each for program level offered in departmental curriculum), as well as from 272 graduating students (graduates, undergraduates, and associate degree recipients from the University's affiliated two-year community-technical college). Factor analysis was used in interpretation of the criterion statements. The factors

viewed by department chairpersons (in hierarchical order) as critical are: (1) as most important, program size; (2) non-teaching work of the faculty; (3) supportive nature of the program (ie., depth in study, survey of knowledge area, supportive of other University programs); (4) understanding program description and objectives; (5) employability; (6) innovativeness; (7) cost efficiency; (8) public relations; and (9) academic standards. These factors as viewed by students (again, in hierarchical order) are: (1) academic standards; (2) cost efficiency; (3) innovativeness; (4) employability; (5) understanding program description and objectives; (6) supportive nature of the program; (7) nonteaching work of the faculty; (8) public relations; and (9) program size. Significant differences in chairpersons' views, by college, were noted for: (1) understanding the program description and objectives; (2) academic standards; and (3) cost efficiency. Similar differences among responding students was noted. Analysis of results and the warranting of these (9) criteria allows the University of Toledo to proceed with identification of specific outcomes (programs) and in the selection of appropriate measurements of those outcomes. It was hoped that awareness, sensitivity, and appreciation for University efforts in program review would result from such coordination of factor priority and cooperation in administration-faculty-student concern.[40]

Mary Jo Clark, of the Higher Education Research Group at the Educational Testing Service, Princeton, has written widely on the subjects of quality and quality review in higher edu-

cation. In a 1976 essay, she reviewed limitations in the study of comparative quality, program accreditation, and program development needs resulting from, in large part, existing informational limitations in the initiation of means by which to affect substantive methodological efficiency and acceptability in gauging educational quality.[41]

A GRE study undertaken by the Educational Testing Service and Ms. Clark, published in 1973, found that graduate deans nationally share concerns in access to information to serve as acceptable indicators in institutional commitment to program review. Indicated by those graduate deans contacted were a number of informational requisites often overlooked by researchers not intimately involved in the process of ascertaining priorities in graduate-level program quality assessment. Presentation of the study's table indicating important doctoral program characteristics, as rated by those graduate deans contacted, is to allow the reader an understanding of concerns of graduate deans, and the complexity of evaluative efforts undertaken by that office. As with other examples in this section, no suggestion as to appropriateness is made.

Important Doctoral Program Characteristics and Their Measurement Indicators, as Rated by Graduate Deans

Characteristic: General academic ability of students entering the program (3.61).[a]

Indicators: Undergraduate grade point averages, scores on graduate aptitude tests, and scores on appropriate advanced tests were rated as good indicators, and most deans said this information was available at their universities. Rated unacceptable: student self-ratings.

Characteristic: Achievements, knowledge, and/or skills of students at time of degree completion (3.61).

Indicators: The deans thought the best measure would be the excellence of recently accepted dissertations as judged by external experts, but almost no one had access to such information. Other good indicators: percent of recent graduates doing work related to their fields of specialization, and percent of recent graduates who published prior to the degree. Poor indicators: scores on standardized tests, evaluations of internship or assistantship performance, oral and licensing examination performance.

Characteristic: University financial support for the program (3.60).

Indicators: None of the suggested financial indicators received very enthusiastic endorsement. Most acceptable was the amount budgeted per full-time equivalent (FTE) student for education and general expense. Least acceptable was the median faculty salary by rank.

Characteristic: Library facilities (3.60).

Indicators: Good indicators were judgements of the adequacy of relevant holdings by faculty and visiting experts, but fewer than one-third of the deans indicated that such information was available. Measures not endorsed: circulation figures, self-reported library use by students or faculty, number of books in the collection.

Characteristic: Academic training of faculty (3.57).

Indicators: Good and available indicators: percent of faculty with Ph.D. or equivalent, percent of Ph.D.'s from "top" programs in each field. Least adequate measures: average grades in graduate school, ratings of excellence by enrolled students.

Characteristic: Purposes of the program (3.49).

Indicators: Good indicators were judgements of the clarity of program plans and purposes by recent graduates, faculty members, or visiting experts, but almost no university collected this information. Available but unacceptable: the ratio of graduates to undergraduates, the number of specializations within a program.

Table continued on next page...

Characteristic: Laboratory equipment and facilities (3.47).

Indicators: Good indicators were ratings of adequacy by faculty or outside experts. Such ratings, however, were seldom available. Measures of space were judged least helpful.

Characteristic: Courses and other educational offerings (3.45).

Indicators: Acceptable measures: faculty/student satisfaction with courses and other offerings, judgements of these offerings by visiting experts. Few deans reported collecting such information. More available, but less adequate: number of new or revised courses, percent of student credit hours devoted to seminars and tutorials, faculty-rated ease of introducing new couses.

Characteristic: Admissions policies (3.43).

Indicators: Acceptable: percent of qualified applicants admitted, judgements by outside experts of whether admission standards should be higher or lower. Unacceptable: the cost of admissions recruiting and processing per FTE student.

Characteristic: Provision for welfare of faculty members (3.42).

Indicators: Most acceptable: median salary by rank, faculty satisfaction with freedom to plan courses and conduct research, provision for assistance to new and young faculty as judged by faculty members. Least adequate measures: turnover rate, percent on tenure, percent ranked full or associate professor.

[a]Deans' average ratings shown in parentheses following each characteristic are based on a four-point scale of essential to not important. [42]

METHODS IN AND FUNCTIONS OF PROGRAM EVALUATION.

Possible decisions from internal study would include increased or decreased support for any program in terms of budget (hence, in enrollment), modifications in goals and objectives for a program, realignment of a program--in so far as affiliation with administration of the university, or discontinuation

of a program.[43] Review is not a passive undertaking, but an effort of perceptable seriousness in intent. This requires the review to be systematically correct and thoroughly justifiable.

That universities need self-evaluation of programs and their students in the graduate sector is evident; what set of criteria placed on what given institutional mission and purpose for the University of Toledo would undoubtedly be different from any other institution. Information which was used in examples cited in the previous section either not available, or not readily available, due to the lack of an efficient student records system in Toledo's Graduate School include: percentage of students awarded financial aid; number of applications and number of acceptances for any department; rates of attrition; quality of students accepted into any discipline, as determined by several indicators; and, student quality at Toledo, compared to other Ohio and regionally-influential institutions.

An evaluation should not only decide <u>if</u> an administrative, departmental, or personal objective has been reached; it should discern <u>why</u> the findings were reached. To answer the question "why" requires, on the part of the evaluators, "analysis of such factors as:

> (1) the attributes of the program itself that make it more or less successful;
> (2) the population exposed to the program in terms of which subgroups are reached and which affected;
> (3) the situational context within which the program takes place, such as auspices, locale, competing programs, and public opinion;
> (4) the different kinds of effects produced by the program, such as cognitive, attitudinal, or behavioral, long or short term, unitary or multiple, including special attention to any negative side-

> effects. In this sense evaluation involves more than judging; it also encompasses research on conditions affecting success or failure.[44]

No one, or no organization, lacking essential information, can make consistently sound judgement on program priority without excessive strain on all involved. Given that an acceptable set of criteria can be established, excessive and unnecessary anxiety as well as personal and institutional discord can be reduced considerably. The writer feels that a remark by Samuel C. Webb is particularly germane. He stated that "If the evaluative effort is to be effective, some systematic specification of the substantive elements about which judgements are to be made are essential."[45] The essentiality of gaining "systematic specification of the substantive elements about which judgements are to be made" requires that the means to that end (or, rather, to the point from which to begin review) be available.

In a November, 1972 publication of the National Board on Graduate Education, the Board warned that there presently exist: the tendency for public policy to affect negatively critical needs in graduate education through acceptance of manpower prognostications based on infirm evaluation methods; a possible overreaction to the depressed market for emerging doctorates, with negative impact for graduate student financial support that is both efficient and equitable.[46] The authors pursued the need for long-range planning for maintaining quality and credibility in graduate education:

> Since a growth of this [rapidly expanding] magnitude could not be sustained [from the '60s into the

> '70s], the system of graduate education is currently experiencing the difficult process of adjustment to reduced growth rates in a less supportive environment. The policies developed to support graduate education during the period of rapid growth, however, were marked by the absence of coordinated, long-range planning, just as current policies to reduce support similarly are marked by an absence of concern for long-range efforts. The National Board on Graduate Education believes that the numerous decentralized decisions currently being made to reduce support of graduate education may have the unintended effect of severely damaging the nation's capacity to provide the quality and diversity of graduate education that we believe to be a continuing national need. While agreeing with the necessity for some limitation and selective retrenchment, the Board is concerned by the absence of thoughtful planning and development of long-range policy designed to ensure continuing strength as the graduate schools adjust to a new environment [emphasis the authors']. Wise policy formation on this complex subject requires the presense of a comprehensive body of fact and analysis, and much of the necessary information is currently lacking.[47]

The nature of self-evaluation in the college or university is such that the intrinsic interdependency of the various units be taken into consideration. Institutional evaluation must concern itself concurrently, regardless of immediate focus, with the many diverse interests, and areas of concern: student academic progress; curriculum theory and development, etc.[48] Failure to view the many areas of the college or university as a unit will necessarily result in an inadequate measure of needs and priorities.

Further, self-evaluation can be effective only if there are clearly expressed policies and goals. Critical examination should herein serve not only present needs, but should also allow for an orderly change to meet definite understood im-

peratives.[49]

All educational institutions are constantly feeling an increased need for ready data to present to state coordinating bodies, to the federal government, and to other extra-institutional bodies and organizations. Whether or not specific information is requested by the state and/or federal government, or other potential funding or pressure sources, an institution that has ready information relevant to financing, accreditation, numbers of students, program quality indicators, etc., will have a comparative advantage over an institution without such information. The need for updated information on the many aspects of institutional operation will undoubtedly continue to rise as the competition for funding becomes more pronounced.[50]

The role of the federal government in program evaluation was reviewed by Franklin and Thrasher (the dependency on other coordinating and policy-making bodies undoubtedly requires similar attention). Regarding program evaluation on the federal level, three trends were noted:

> (1) Standardization. Many of the newer federal laws require the establishment of minimal standards for service delivery, if the program is to qualify for federal support. We are not concerned here with the shortcomings or the advantages of federally determined standards (the shortcomings arise from the diversity of the country, the advantages from the universal protection of the public), but only with the effect that the standards are developed (in fact, the closer to the program, the more stringent the standards seem to be) they will not and cannot pass for long as evaluations. Standards, at best, can describe the conditions that will ensure effectiveness. Such insurance cannot be delivered in the forseeable future. Therefore, evaluation will test the standards, not the other way around, and the demands for accountability will soon separate the standards from the evaluation.

(2) Continuous monitoring. The federal government will provide the impetus, but not the direction for the incorporation of evaluation into continuous monitoring systems. The federal government is currently in its second wave of enthusiasm for management information systems. Realizing that its first flush of enthusism did not result in its promised solution to the problems of evaluation, however, the government in its most recent legislation . . . separates the admitted advantages of management information systems from the equally necessary requirements of program evaluation. Prediction: sophisticated computer technology, demands for accountability, and additional requirements that evaluation be a recognized part of management will result in the incorporation of evaluation into management information systems. After some delay, the resources necessary to do it will be found.

(3) The specification of evaluation requirements. The skepticism of legislators and the advances in evaluation technology (probably in that order) have led to federal legislation requiring outcome evaluation. In this, the agents of the federal government are meeting enormous resistance, stemming from causes already mentioned. Prediction: outcome evaluation will become a federal requirement and will be incorporated into the managerial activities of administrators, but only with great reluctance, and only after several battles (perhaps in court) about the abilities of programs to comply. What are apt to be federal requirements will not tax the technology of evaluation.[51]

PROCEDURAL CONCERNS IN EVALUATION EFFICIENCY.

Developing concern over the tendency toward exacting statistical assessment for educational policy and program priority (views of several educational researchers follows) is warranted. It is, of course, clear that data in naive hands (and heads) could promote misuse of statistical information and informational procedures. Certainly, enough people tend to subscribe to strict quantification in program and individual assessment that there is cause for concern. Perhaps, however, given selected public and political attitudes toward a need for quantifiable financial accountability in higher education, the preposterous

situation of having to prove, through quantification, that education must be judged by indices other than those statistical, will become evident.

Lynn W. Lindeman summarized eight commonly indicated reasons for faculty distrust of and objectives to accountability (both institutional and extra-institutional) in higher education:

(1) The term accountability is relatively new in its present and most common usage. Because it is new and vague in concept, there has been no consensus as to common methods for measuring accountability in colleges and universities. Different sectors of society (legislatures, courts, governing boards, students, faculty, administration, et. al.) have differing concepts in definition. Hence, a lack of precision in definition often means coping with individual personalities or group traits, rather than basing judgement on accepted and stable norms.

(2) Considerable loss of autonomy is possible in meeting requirements (governmental, institutional, et. al.) in any process of assessing accountability. While feeling a loss of autonomy, however, some faculties have moved to require accountability from others.

(3) Lindeman pointed to Thorstein Veblen's The Higher Learning in America (1918) and Raymond Callahan's Education and the Cult of Efficiency (1962) as works representing fear of accountability by faculty. A continuing fear is evaluation not as assessment of instructional and research quality, but as (a) a tool to cut program costs, and (b) as a device to note quantity of research, rather than quality in both quality of

teaching and quality of research.

(4) By the very nature of institutions of higher learning, evaluation of accountability is made impractical. Accountability could be more effectively accomplished in a hierarchical situation, with more clearly defined measures of talent and expertise at predictable levels.

(5) Public officials find it most adventageous to view higher education from a financial standpoint; fiscal procedures are not, in themselves, adequate or applicable indicators of program accountability. Lindeman quotes Malcolm Moos and Frances E. Rourke, who, in The Campus and the State (1959), wrote that "Education is intricate in design and ancient in lineage, and it can not be viewed in terms of unit costs, rigid personnel requirements, and audit exceptions."

(6) Accountability for priorities and program effectiveness is often through guidelines imposed by individuals who have insufficient knowledge of the function and goals in higher education generally, and of individual disciplines in particular. In The Capitol and the Campus (1941), the Carnegie Commission on Higher Education warned of "heavy-handed regulatory controls over higher education" in this context.

(7) The notion of accountability often tends to be a statistical exercise--not methodologically sound--ignoring variables in education that are, by nature, beyond quantification. And,

(8) Methods for measuring accountability in higher education tend to be unreliable. There are no standard, acceptable criteria in program quality assessment. Hence, statistical methodology differs, and procedures for analysis fail to take

into consideration non-quantifiable program objectives.[52]

In 1966, Francis E. Rourke and Glenn E. Brooks noted the existing historical division between administration and faculty creating a mistrust in the implementation of more sophisticated and heavily complex information and data generating systems. The principal beliefs which tend to create doubt toward such administrative initiative, note the authors, are: (1) that administrative attempts to measure educational input are inherently faulty, for, while quantification through the various data generating systems may be applicable for selected non-academic aspects in educational organization, administrative overemphasis on statistical standards may eliminate qualitative criteria in institutional, program, faculty and staff, and student quality assessment; (2) that the nature of educational aims and objectives resist implementation and use of standard managerial techniques--educational inputs (e.g., financial resources and personnel) may have a certain effective measure, but the complexity in appraisal of efficiency in output negates application of statistically-heavy evaluative standards; and, (3) that intricate and sophisticated evaluative measures can be, and occasionally shall be, used in order to enhance the administrative base of institutional support, given the opinion that expansion in the institutional role of the administrator usually eventuates in a corresponding decrease in the jurisdiction and prestige of the faculty.[53]

Rourke and Brooks noted that, while there does not <u>necessarily</u> follow a centralization in power with centralization of

data and information, observations by the authors did indicate that a great majority of institutions which had evolved a centralized data and information system had also evidenced a clearly indicated, corresponding centralization of institutional authority.[54]

Similarly, Earl F. Cheit pointed to inevitable increase in high-level authority eminating from centralization of the various information processes. The nature of existing organizations into which information systems are entered commonly lead to such situations: "Systems are being built on top of governing structures or at the headquarters level; therefore, centralization of decision making is occurring, and the power of informal collegial systems and even of the formal organization at lower levels is declining."[55]

C. Robert Pace gave attention to areas in institutional evaluation that require assessment methods other than in the usual input-process-output model(s):

> . . . the context of criticism [ie., institutional evaluation] has turned to criteria of productivity, technological efficiency, costs, return on investment, and studies of something called output with something called input somehow controlled. And, in contrast, a more humanistic and personal development and ecological view of education is demanding recognition.
>
> The typical evaluation design today is an input-environment-output model. College effects or college impact or environmental influences are defined as what's left after input differences have been accounted for.
>
> The virtue of the model is that it guards against attributing to the environment a result that is predictable without any environmental intervention. But the vice of the model is that it makes some obvious environmental influences impossible to demonstrate. . .
>
> My general uneasiness with the input-environ-

> ment-output model is philosophical as well as technical. I'm not sure that a productivity or output model is the right way, or even a desirable way, to think about the purpose and function and benefit of higher education, and to evaluate its impact on students. The more specific and limited an objective is, the easier it is to devise a series of lessons to assure that students will attain it, and therefore demonstrate "impact" and "accountability" to a gullible audience. But the sum of such small parts does not add up to the whole of higher education; in fact, it may well add up to a distortion of higher education. My own interests in evaluation are with more global purposes--one typically associated with general or liberal education, depth of understanding in a discipline, and knowledge, values, and skills relevant to a profession. What on earth is mastery learning with respect to goals such as moral development, intellectual curiosity and skepticism, esthetic sensitivity, critical thinking, awareness of relationships and consequences, an understanding of how knowledge is created and truth claimed and replaced by deeper insights, or the recognition of quality and excellence and virtue?
>
> Nevertheless, governors, legislators, taxpayers, and many new students are asking, "What are we getting for our investment?" So we tell them how many students graduate or drop out, what the faculty teaching load is and the cost per credit hour, and who gets what kinds of jobs. By accepting the validity of the question and trying to answer it in productivity terms, we reinforce the productivity concept of what higher education is all about. Perhaps we ourselves should be asking different questions and trying to answer them in different terms.[56]

Dr. Pace contends that "accurate knowledge is not necessarily adequate knowledge and may lead to curiously inadequate and incorrect judgements."[57] Issues usually not thoroughly addressed in assessments must be considered (e.g., personality, attitudinal judgements, social significance, tolerance, independence, et. al.). Should there be no development of methods in evaluation for such institutional concerns, Dr. Pace feels that then the evaluation would be lacking input of needed criteria

for comprehensive review and appraisal.[58]

Both faculty and administration have shown considerable suspicion of the behaviorally-oriented evaluation of student performance. First, there is question as to whether this orientation is correctly adaptable to higher education, an area which is a distinctly human enterprise, with human aspects distinctly intangible. Second, efforts toward program improvement often tend to be a considerable expenditure of energy and money with little evidence of substantive improvement.[59]

There is, and will remain, difficulty in establishment of appropriate criteria for gauging student performance. A difficult consideration is the extent to which student performance can be attributable to faculty competence, and to what extent attributable to individual initiative, free from faculty influence. Standardized indicators tend not to take into consideration subtle changes in the student, and considerable justifiable concern could be given to development of the student in only that manner which would correlate favorably to student performance criteria.[60]

In 1969, Peter H. Rossi wrote of the lack of incisive quality in institutional self-evaluation of educational programs. Citing "the politics of research" as impeding quality inquiry in this area, Rossi wrote that "The main problem, as I see it, is that evaluation has not yet been accorded its proper place as playing a major role in policy formation and change. Policy is formed without considering what kinds of evaluation research would be needed to sustain the worth of a program and, even more important, what are reasonable alterna-

tives when evaluation indicates that a program has failed. Without such a two-pronged commitment to evaluation, research tends to be wittingly or otherwise designed to produce irrelevant results shoddily conceived, poorly carried out, and easy to disregard."[61]

Evaluation of institutional, program, and student performance, however, is becoming more sophisticated, and (hopefully) so are those administrators and faculty who undertake evaluative insight into students and their academic programs. Awareness of difficulties in such intagible areas as attitude and interest is necessary. Undertaken carefully, with insight into the various limitations in evaluation of student and program performance, an assessment in this area could be undertaken with increased assurance of objectivity.[62]

In a 1973 American College Testing Program study, Oscar T. Lenning pointed to the continuing methodological problem in providing for adequate program evaluation. Suggestions relevant to improvement of competence in statistical methods are:

(1) that severe limitations exist among those charged with statistical evaluation of academic programs;

(2) given that maintenance of methodological efficiency in this area is quite difficult--even for the most highly qualified educational researchers--assistance in program evaluation is warranted; and

(3) that regional consortia in testing and measurement methods for program evaluation be encouraged. This would allow

for on-going design consultation by educational research specialists, and would foster coordination in research method, predictors, and criteria.[63]

Adrian H. Harris stressed use of comparative data as valid indication in consideration of institutional priority and for institutional judgement, but only as one of several pertinent evaluative criteria.[64]

Comparative studies, institutional and extra-institutional, must be undertaken with extreme caution, with the knowledge that any two departments, although apparently quite similar, will be substantially different in available resources, in objectives, and in organization. All would respond differently to institutional priorities and policies, as well as to extra-institutional demands.[65]

Mr. Harris stated that certain conditions and safeguards are necessary to a meaningful comparison for any set of data. "Sufficient particulars must be provided to allow rational accomplishment of the task. Specifically, they must seek to:

> Fully agree on the purpose of the comparison and the use to which data will be put;
> Insure that the data to be collected are consistent with the expressed purpose;
> Define all terms explicitly and include detailed definitions with any data disseminated;
> Provide profiles of each program to be compared, including information on all aspects of program which may affect the data; and
> Permit the providers of the data to review the results so that errors of fact or interpretation may be avoided.[66]

A principal difficulty in cost analysis of institutional programs is that graduate offerings--more so than undergraduate programs--tend to be inherently interrelated with at least

several aspects of organizational operation. The nature of graduate education and the roles assumed by the participants make cost analysis extremely difficult and complex. In Federal Policy Alternatives Toward Graduate Education, Frederick E. Balderston contributed a paper emphasizing procedural concerns in graduate program evaluation through cost analysis study. In estimating viability (via cost) for any graduate program, a university must consider total cost as a function of the following:

> 1. the scale of that university's resource commitment in the field, the size of the graduate program itself, and the interrelations of that program with research and undergraduate programs in the same field and with other neighboring academic areas.
> 2. the methodologies of scholarship and the modes of graduate instruction and study that are specific to the field, and the standards of scholarship and style of work that are characteristic of it.
> 3. the quality of the program, and the intensity of aspirations for quality improvement (the latter causing heavy transition costs from institutional sources if quality improvement is attempted on a crash basis).
> 4. the efficiency of use of resources, including (on a multiyear basis) the effectiveness of choice of a path of further development of the program.[67]

Dr. Balderston stressed that cost analysis can be judged as only one aspect of total review. Because graduate education is inherently complex in any institution through interrelationships to research, to undergraduate educational efforts, et. al; because methodological efficiency is not possible since definitions and measures are lacking; and, because institutional coordination of program resources make estimates confused or unreliable, quantitative efforts are useful only when supple-

mented in review by those aspects of quality, worth, and viability transcending limits in statistical examination (cost analysis and/or other statistical indices).[68]

Felix M. Lopez examined organizational circumstances which present certain defects in accountability system implementation leading to failure in tactical design and general acceptance: (1) many accountability programs have been implemented in a system with little organizational tradition and no philosophy in design--only a program which was designed for a certain purpose in a specific setting will be successfully adapted; (2) administrative courses in program review have tended to be oversimplified--the need for a well-designed (and individually-attuned) accountability arrangement has demonstrable validity; (3) most administrations involved in program implementation when and where accountability review exists have failed to fully inform and work with those who are to be tested by the existing system; (4) a difficulty in pointing to appropriate criteria for reliable assessment makes evaluation suspect--criteria tend to be nonspecific, biased or unreliable, varying over a period of time, varying in different circumstances, resistant to combination into a single index of effectiveness, and neglecting the fact that different performance patterns may affect the same result.[69]

Given the situation outlined above, Mr. Lopez writes that evaluation systems must note certain essential requirements: (1) administrative commitment to open communication in establishment of personal goals in an evaluative framework is imperative; (2) an organizational philosophy must exist in order

to establish confidence and trust; (3) standards, procedures, and practices must be dynamic, flexible, and realistic, and should be based on ethical principles and sound, relevant policies; (4) purposes for accountability review must be implicit in program design and function; (5) acquisition of information through which appraisal is to be made must not obscure the fundamental objective, ie., the improvement in performance of each set of duties of individuals in the organization; (6) discussion of objectives must be handled with great care, for this process is instrumental to successful implementation, adoption, and survival of the program; (7) that the system will be both efficient and accepted, all concerned should participate in design, installation, administration, and review of the evaluation program.[70]

ASPECTS OF INFORMATION AND INFORMATION GENERATION/DISSEMINATION AS AN ORGANIZATIONAL AND EXTRA-ORGANIZATIONAL PROCEDURE.

College and university administrators in the public sector often view information in a substantially different manner than do statewide planners of the coordinating or governing-coordinating board.[71] Arthur D. Browne has articulated differences inherent in planning and evaluation needs and procedures--and the conflict this produces--between the two sectors:

> . . . Compared with the institutional plan, generally the system's plan discriminates more of its variables quantitatively than qualitatively; utilizes comprehensive data to measure the perimeters of the system; places emphasis on such matters as state-wide educational opportunities, differential functions and programs, faculty demand and supply, relations with state government, procedures for equitable distribution of funds, etc.; formulates policy controls and coordinative organization; displays more sensitivity to broad

> public sentiment and pressures, particularly those arising from taxpayers and legislatures, and less regard for local idiosyncrasies.
>
> By contrast, the institutional plan devotes more attention to qualitative assessments of its elements; makes descriptive studies of institutional operations and programs; emphasizes such matters as student selection, curriculum revision, faculty recruitment and deployment, need for facilities, funding requirements, etc.; reviews the administrative organization as a means of facilitating programs and functions; and is sensitive to the idiosyncrasies and dynamics of institutional constituencies--students, faculty, administration, governing board, and alumni.[72]

Such differences in responsibility and perspective raise serious questions of autonomy in the educational efforts of individual institutions. The college or university sees the threat to freedom and independence from several perspectives: uniform policies and controlling devices are often at cross-purposes with good management practices; statewide efforts to prescribe differential functions by adhering to the 'status quo' harms developmental efforts of smaller and "emerging" institutions; controls in such areas as personnel and budgeting can create a distant and unresponsive authority promoting possible gross inefficiency; and, most critically, centralization of authority can act to stifle local initiative and creativity in administrative and academic efforts. On the other hand, the statewide coordinating-governing body advocates discipline and restraint based on certain requisites for efficient and reliable planning; state colleges and universities have recognized service and leadership responsibilities to those who support higher education; just as efficiency is increased by the coalescence of educational institutions into larger units, efficiency of a

larger overseeing administrative-managerial function should be recognized; and, "It is archaic to think of autonomy as the particular province of a small group--even a campus group. Self-direction of one group may obstruct the "autonomy" of a larger group."[73]

The reality of circumstances, according to Dr. Browne, is that "If the trend is inevitable, then institutions must learn to cooperate with the inevitable."[74] It should be noted, however, that Dr. Browne does not imply blind submission and negation of right to autonomous function. He does emphasize that the situation is such that all involved bodies and/or agencies and individuals must work closely, in realization of the interdependent nature of present and emergent conditions, to inform others--so far as is possible--of needs, priorities, and of efforts and decisions. Dr. Browne's faith in the success of such articulation hinges not on the nature of the system, but upon the constitutions and inclinations of participating individuals: ". . . the issue of autonomy versus coordination hinges upon the faith and the integrity of the participants--the institution and the system--to work together toward common goals of service. Mutual respect and cooperation provide the foundation upon which a maturing and compatible relationship can be constructed. Such a climate fosters effective planning."[75]

Because of these differences in procedures and perspectives, institutional coordination and cooperation in information compilation and dissemination to the state government could result, writes Frederick E. Balderston, in circumstances detrimental

to an institution, should to "superstructure," ie., the state regulatory or coordinating agency, be shortsighted regarding the complex of functions and priorities in the nature of the various educational procedures of any single institution of higher learning--specifically a breakdown in what Dr. Browne termed "faith and integrity of the participants" and "mutual respect and cooperation." In response to the potentiality of such a breakdown, Dr. Balderston stresses that the state coordinating agency, as that single predominant decision-making body affecting the educational viability of state-financed colleges and universities, must be comprehensively informed so that adequate statewide evaluative and planning efforts might proceed intelligibly. The colleges and universities concerned, however, must assume the obligation of educating the state coordinating agencies of methods in and limits to existing evaluative methodologies in gauging educational quality and administrative responsibility.[76] Only then can review and planning be undertaken usefully and responsibly:

> The technical apparatus for the superstructure is growing: quantitative forecasts, cost analysis and measurement techniques, program identification and program control, and in the end, a much more sophisticated range of controls and pressures by means of conditions and restrictions attached to state appropriations. In one sense the necessity to justify program decisions and budgets is a good exercise of accountability for publicly-supported universities and other public institutions; after all, they do live on subsidy, and they can quite reasonably be asked to demonstrate what they are doing with the money.
>
> But there are two serious problems. The most important in the short run is that those who man the superstructure are mostly new at their jobs; they vary in quality of training and scope of thinking, and they are vulnerable to immediate political pressures. The more important problem

> for the longer run is that the schemes of planning that are coming forward in these superstructure agencies may fail to take account of the most significant academic and organizational characteristics of the educational institutions that are brought into the framework of planning and control. To the extent that this failure of concept occurs, the framework will be seriously defective in its predictive characteristics, may go wrong in policy terms even from the standpoint of state governments (as distinct from institutions) and may be actively damaging to the quality and scope of higher education.
>
> The long-range remedy for this long-run problem would be for the universities to work vigorously to educate the superstructure planners about the academic and institutional facts of life, providing them a far better, more complete and deeper picture of the academic enterprise than they now have. Unfortunately, the present developments are taking place in an adversary climate. Information is a weapon. It is not clear to the universities that they should suffer the short-term penalties of providing more informational ammunition to their superstructure adversaries, in return for the (uncertain) future benefits of greater understanding.[77]

Because of increased complexity in the organization of higher learning, a number of forces act to defeat the operation of accountability as a logical and compelling exercise. W. M. Sibley outlined requisites to successful operation of any system of accountability as a positive, equitable, and viable undertaking:

> If the call to accountability is to function in a positive manner, a number of far-reaching issues must be addressed. First, efforts must be to ensure that the requisite conditions of accountability are maintained or, where necessary, reinstated. Second, economic conditions are such that institutions of higher education will have to respond to the demand for more efficient models of management and governance. Inefficiency and lack of genuine accountability at this level are an open invitation to those who would tamper with institutional autonomy. Finally, institutions will need to reappraise their role and mission, as well as their types and levels of programs, in keeping with probable levels of fund-

ing. To accomplish this, educators and administrators alike will need to cultivate on the part of political authorities a better understanding of the idiosyncrasies inherent in the unique nature of higher education. Indeed, it is at the interface between colleges and universities on the one hand and government or its agencies on the other that many of the factors defeating accountability are rooted. More efficient and effective relationships at this point are therefore mandatory. Retreat to the ivory tower is no longer a live option. Colleges and universities must surrender much of their erstwhile independence from state control; and yet, in the long run, the interests of both government and higher education are best served if they can reach a mutual accomodation, in which educational institutions are assured a reasonable degree of autonomy and adequate levels of resources in return for a viable level of accountability. If the contemporary debate over accountability can be directed to the better perception of such basic realities, it will have been a constructive episode in the history and development of higher education.[78]

CHAPTER III

THE UNIVERSITY OF TOLEDO GRADUATE DEAN, INFORMATIONAL IMPERATIVES, AND ADMINISTRATIVE COMMITMENT TO SELF-EVALUATION

In a letter addressed to Dr. James Q. Dealey, Chairman of the Faculty Committee on Academic Policy, dated March 12, 1953, Dr. John J. Turin--then Chairman of the Sub-Committee on Appraisal of Present Course Offerings and Faculty Loads--made comments on need for internal review as integral to fiscal and academic stability:

> At a meeting last fall of the Academic Affairs Committee the writer reported the discussions of the undersigned sub-committee regarding "academic level" of the University. The sub-committee was subsequently directed to consider questions pertaining to the academic level of the University as its first order of business. The sub-committee has considered this problem carefully and this letter constitutes the report of the sub-committee on the subject of academic level of the University.
>
> Originally the feeling was that it was necessary to determine the academic level of the University so that course evaluation and faculty loads could be set in keeping with the academic level that was desired.
>
> Careful consideration however made it clear that the academic level of the university could not be defined in itself. The academic level of the University is a vague term and can only be defined in terms of other more specific factors. There appears to be good reason, however, to believe that the academic level is seriously affected by the following five major items:
>
> 1. The entrance standards of the University;
>
> 2. The academic level and uniformity of level of the courses offered at the University;
>
> 3. The experience and academic level of the faculty and administration;

> 4. The level or state of development of the physical plant and laboratories;
>
> 5. The financial level or status of the University.
>
> Although these items may be discussed separately they are all integrally interrelated with one another and certainly all of them are basically bound to the financial structure and source of funds from which the University finds its support . . .[79]

It should be remembered that 1953 was a time of difficulty for America's colleges and universities. After significant post-war expansion, both national economic recession and reduced numbers of students placed great responsibility on institutions of higher learning to provide maintained quality education, in part through intensified policy and priority review. Integral to that end was in providing funding sources with as much information from self-study as was possible. The then "metropolitan" funding status of the University of Toledo no doubt added to the financial strain and the need for institutional review.

In "Graduate Education at the University of Toledo," an April 1969 paper written by Acting Dean of the Graduate School Alfred F. Foster, Dr. Foster articulated the desirability of institutional review:

> In educational planning there are duties owed to the educational system by others outside it. The legal requirement that graduates of accredited high schools should be free to attempt any curriculum must not be permitted to debase the quality of the curriculum below a nationally accepted standard. It is important to keep a steady progression from the introductory courses to the most advanced, without lapsing at any stage below the highest quality. Just as the professional mathematician must free himself from intellectual snobbery toward those of

lesser competence outside his field, so must the community refrain from imposing in the name of democracy a standard of mediocrity on the universities.

The country is extremely mobile these days. The sons and daughters of Ohio go to work in the factories of California and Michigan and Massachusetts and their university education must qualify them to compete with others educated in the best schools of the nation. The factories themselves are mobile and, while they move to states where unskilled labor is cheap, the more desirable industries do not move to states where educational institutions are mediocre. The industrial strength of Massachusetts is concentrated on Route 128, with Harvard and MIT at its center, and the prosperity of California owes as much to Berkley and Stanford and Cal. Tech. as to its sunny climate.

Let me close by listing some points worthy of debate and serious thought:

(1) The State of Ohio and its elected representatives in the legislature are late in coming to a realization of the quantity of higher education to be provided the young people of the state and they have not yet faced the need for a much higher quality in both graduate and undergraduate education, one which will assure degrees with universal legal tender;

(2) The City of Toledo and its school district should join the University of Toledo in providing ready access for high school students of all kinds to the intellectual challenges which await them in graduate study in a subject-matter discipline, in the hope that the best students will not leave Toledo for higher education, but will stay here for master's degrees and doctorates.

(3) Graduate facilities and accrediting agencies should look with a tolerant eye on the activity of educating undergraduates, for both terminal and advanced work in either their own field or another specialty;

(4) Since undergraduate education tends toward specialization at the expense of liberal education, thought should be given to expanding the undergraduate curriculum from four to five years in schools such as Engineering or Pharmacy or Education, making their degrees post-graduate.

(5) Although, from the point-of-view of the accrediting agencies and graduate facilities, graduate education is directed solely to the production of scholars, it is the only source of teachers of high quality at high levels and some

greater attention should be paid to training graduate students as teachers;

(6) Some systematic method might perhaps be designed for assessing the quality of the university faculties in other areas than in publication, where their performance can be evaluated, counted, or weighed.

(7) Although the University of Toledo is not in a position of such national prominence that it can afford to pioneer in a radically new direction, it might be interesting to speculate on the possibility that specialization has gone too far and that the next educational wave might be better directed toward consolidating the gains we have made, cross-fertilizing the various academic fields by inter-disciplinary studies, evaluating scientific advances in larger terms as they affect the whole society, and reestablish the academic scientist and scholar as a broadly educated, literate human being, concerned with every aspect of human activity because he is "involved with mankind"; and

(8) One of the defects of graduate instruction, it narrowness, might possibly be repaired by extending the time, with provision for financial support at reasonable levels for the entire duration for every candidate, recognizing that the social utility of graduate education justifies the extension of the idea of free public schools to every stage.[80]

In the March 1974 Report of Master Plan Committee on Graduate Education, the Acting Dean of the University of Toledo Graduate School, Dr. William Muckenhirn, with the Master Plan Steering Committee, presented concepts for graduate-level program development and academic quality control. Implicit in attempts at specification of priorities in programming was the concept of quality imposed by action and purpose--and the uses to which these are to be put as appropriate to graduate education. Essential to equitable and effective programming is continuing evaluation on known, standard criteria:

[A] weakness of the present system of graduate education is the failure to provide for the systematic collection of the kinds of data required for continuing evaluation of graduate programs . . .

[Another] weakness of some of the graduate

> programs pertains to quality control, especially at the doctoral level. As stated earlier herein, the Colleges should have the responsibility for graduate program construction and implementation, but each College should establish and closely follow procedures to monitor doctoral programs from admission to completion, and those procedures should specifically include provisions for monitoring dissertations.[81]

And, further:

> The market is sensitive to the scholastic qualifications of the people it hires. Program evaluations should include an appraisal of the qualifications of the applicants to the program. Grade point averages and admission test scores of all those admitted to the program should be compared to national as well as university norms. Outstanding students will assist in the process of developing excellent programs; weak students will result in mediocre programs . . .
>
> The strength of any graduate program rests ultimately on the capabilities of the faculty. Data must be obtained and analyzed yearly relating to: number of faculty with major commitments to the program, student-faculty ratio, number of research papers or publications produced from the program, amount of outside funding received, and number of graduates.[82]

In May 1977, Deans from three graduate schools (Michigan--Ann Arbor, Minnesota--Minneapolis-St. Paul, and Indiana--Bloomington), on behalf of the Commission on Institutes of Higher Education of the North Central Association of Colleges and Schools, reviewed and assessed graduate education at the University of Toledo. Appraisal was limited to review of doctoral program accreditation standing; other related concerns in areas deemed supportive of doctoral programs were investigated. The report was generally favorable of existing doctoral programs (and program development efforts of those doctoral programs) at Toledo. However, throughout the report were continually identified reservations concerning the lack of centrality of

the Graduate School in decision-making, and reservations relating to organization of the Graduate School for effective day-to-day operations--as well as existing barriers to evaluation because of an inadequate university-wide information system. Among the comments of that evaluating team:

> It was apparent in the visit to the institution that there was a striking lack of an institutional data base and information system essential for planning and decision making. Faculty personnel data, admission and records statistics for students, research and program activity profiles, facility and equipment inventories, and space allocation information and the like do not appear to be easily or directly available. A large proportion of such vital data seemed to be available only by rather laborious hand computation . . .
>
> With the prospect of initiating graduate program review and evaluation in the immediate future, it is particularly important that an adequate data base and informational system be established if maximum benefit is to be derived from these exercises.[83]

And:

> We could find little data on the distribution of women and minorities in the graduate school. These data must exist but were not available in the Graduate School.[84]

And:

> The need for adequate data and for more strength in the Graduate School can be underscored by the small size of its staff. Despite being larger in enrollment than most of the graduate institutions in the state, the University's Graduate School has a smaller staff than most. This matter ought to be considered by the administration in the light of the suggestions we have made about functions of the Graduate School that should be improved . . .[85]

CHAPTER IV

THE COMPUTERIZED STUDENT RECORD SYSTEM

ORGANIZATIONAL PROBLEMS IN THE GRADUATE SCHOOL STUDENT RECORD SYSTEM.

As the number of graduate students at the University of Toledo has increased, so has the volume of work to be performed in the Graduate School. Lack of adequate space is a continuing problem, relating in particular to the storage of files of student records. The small number of persons involved in clerical duty makes for a hectic pace; given the size of existing facilities, increase in size of clerical staff (probably beyond one additional individual) would make for excessive crowding and interference with each other's work. (It should be noted that adequate file storage space and additional office clerical assistance may solve a minor aspect of the overall difficulty, but would fail to rectify the pressing problems of access to comprehensive, updated profiles needed for long-term planning and policy study.)

In summary, the more pressing problems are:

(1) Insufficient space for student record storage.

(2) Clumsy student record retrieval methods.

(3) Similarly difficult methods in interfiling.

(4) Computer grade and credit hour updates take too long through the University Computer Center. As updating sometimes takes four weeks, this must be corrected. Also, computer updates are not available to the Graduate School on students who are not scheduled to continue course work the following term.

Therefore, grade reports are not complete for many students.

(5) Duties other than those related to student records preclude the amount of attention warranted to student file updating, maintainance, and evaluation. Particularly hectic schedules are maintained during registration; during add-drop periods; at that time during which duties are assessed for graduate assistants, and in ensuring graduate assistant expenditure by each graduate department does not exceed monies allocated (this is not an uncommon occurrence); in assessing plans-of-study submitted by students; and, in the multiplicity of other routine tasks (telephone inquiries, correspondence, et. al.) by the Graduate School staff. The dean does most of his own typing, and much of the other typically clerical duties in routine day-to-day functions.

(6) As an interim measure, it is possible that certain non-computerized informational systems could be developed. However, such systems could serve only selected aspects in updating and maintainance, and would not provide ready access efficiently, so as to be applicable for the greater portion of information updating and maintainance, and for internal review and other administrative and academic activities. Cost outlay for an information system that would be only an interim measure would be highly suspect.

(7) Increasing demands on Graduate School staff have forced suspension in letters of notice regarding provisional admit status; regarding up-to-date notice of PR's (work-in-progress grades) and Incompletes; and regarding notice of inadequate academic standing (ie., GPA below the minimum acceptable 3.0).

As more responsibility--and more routine tasks--have been taken on by the office of the Graduate Dean, the lack of control over student records has led to increasing difficulty in performing those functions traditionally held by that office. Competence, long hours, and severe dedication invariably shall fail to overcome limitations inherent to the situation.

While the computer is not itself an answer to administrative and academic problems, its necessity in aiding to resolve institutional problems is certain. Used wisely to gain optimum efficiency of available resources and to gain specific attention to allow for sound decision-making, administrators have found no doubt in the validity and essentiality of computerization. The use of computers in reduction of transactional (e.g., clerical) operations may have comparatively little overall financial gain when compared to both human and financial benefits of increased planning and operational efficiency.[86]

CONCERNS IN IMPLEMENTATION OF COMPUTERIZATION.

The pressure on administration to responsibly allocate limited resources to competing areas and disciplines is great, and shall be greater in the future. Automation, instituted through lobbying by promoters of sophisticated information systems, can lead to ever-increasing demands for appropriations. On the other hand, administrative reluctance to wrestle with issues of suitability could mean reduction in both quality of services and in status of educational offerings.[87]

Most existing information systems were designed and implemented during a time of rapid expansion both in numbers of students and in the amount of funds available to colleges and universities handling the increasing numbers of students. Principal emphasis was placed on providing administrators with information of a transactional nature: operations (payroll), student information, personnel information, etc. At present, however, emphases in planning priority and institutional policy formulation often bear little resemblence to previous situations. Effective and responsible resource allocation is increasingly troublesome in a no-growth situation which yet seeks maintenance of existing levels of institutional quality. Such a situation, therefore, demands attention to an entirely new set of concerns in planning for informational priority in administrative and managerial function.[88]

The decision whether to computerize the student academic record should be made "in terms of local characteristics, priorities, and individual aspects of the institution." Easiest criteria to evaluate are: (1) economic capability; and (2) talent availability. More difficult, long-range considerations are: (1) size; (2) desirability of future growth; and (3) acceptance of the system by the institution. "To be a success the system must be supported from its inception by institutional philosophy and practice." Other concerns are cost studies for hardware, software, availability of trained programming personnel, and programming (time) availability.[89]

Given that the University of Toledo has committed monies to the more expensive aspects--hardware and availability of trained staff--both economic capability and available talent should seem reasonably assured for such an additional moderate-sized concern. Providing that there already exist both computerized registration and computerization in grade reporting, extending the operation to include needed and highly usable student records would justify serious consideration.

Centralization in an automated student record (information) system can reduce excessive duplication in both record-keeping and in time spent in updating, maintainance, and retrieval. The student could, through a computerized system, receive more attention; in minimizing duplication in record-keeping, the centralization of records would free staff to give more attention to the student and his or her progress, rather than in giving the attention to the process involved in management of paperwork.[90] Faculty or departmental staff could have quick access to information on present and past students, incoming students, and applicants, thereby reducing difficulties in departmental record-keeping, and in expediting institutional flow of information. (Given previously-cited possible negative circumstances arising from centralization of institutional information and the benefits introduced at this point, it should be presumed that decisions made would have to be on an institution by institution basis involving the several critical administrative and departmental areas served by such a suggested arrangement.)

Security in any student record system requires that

attention be given to that concern. Losses could be suffered not only through potential abrogation of professional responsibility in any informational system management, but also through error, theft, or disaster (such as fire). A certain security method in access to computerized records provides that only authorized personnel have the ability to reproduce confidential information. Since a computerized information record, in whatever form of output, COM (Computer Output Microfilm), tape, disc, or print is reproduced easily by authorized personnel at specific intervals and can be conveniently stored elsewhere, a safeguard against loss is established.[91]

EXAMPLES OF COMPUTERIZED STUDENT RECORD SYSTEMS.

The Virginia Polytechnic Institute emphasized an orderly development and implementation of each major subsystem in that institution's highly sophisticated student records (information) system. The computerized system is integral in support of registration, admissions, and maintainance of student accounts. Batch processing permits a daily balancing of the student accounts. The system has a centralized system control to support the decentralized input/output functions. VIP's computerized student record system allows for managerial evaluation through use of terminal usage statistics.[92]

The University of Michigan--Dearborn Campus employs computerization in registration and grade reporting, and has found it economically worthwhile to extend this to serve as a comprehensive student information system, as well. Special attention is given to indication of probationary (and po-

tentially probationary) students. Distributed on a periodic basis are microfiche copies of student transcripts; microfiche copies are distributed to both students and advisors. Microfiche readers are made available throughout the University.[93] The readers are approximately $150 each.

Case Western Reserve University*, some years ago, attempted several alternative non-automated (such as color-coding) and semi-automated (such as the "Peek-a-Boo system") processes in updating, maintainance, and review of student records. Such systems proved somewhat useful in identifying Incomplete grades, academic standing, and similar academic needs, but were not adequate for consistently proficient levels of functioning for more than several hundreds of students.

A computerized system has now been in operation for some years, and serves well in providing information concerning Case Western Reserve as a whole, Case and Western Reserve (which have separate budgets), departmental profiles, and information relating to the academic and financial status of individual students.

The operation can provide--through the University's Computer Center--information regarding single concerns such as Incomplete grades or those on provisional academic status. Additionally, on a periodic basis, departmental profiles are produced, including: average GPA; average GRE and/or MAT;

*The writer obtained the information during a visit to CWRU.

financial aid funding already approved and the amount still available; and, attrition rates.

Both departmental profiles as well as information on individual graduate students aids both the Office of Graduate Admissions and the Office of the Graduate Dean in giving considerable attention to departmental characteristics and in maintainance of desired levels of quality, as well as in determining financial needs among the various departments.

Neither the Office of Graduate Admissions nor the Office of the Graduate Dean have on-line computer mechanisms. Rather, an intimate cooperative relationship between these offices and the Computer Center allows for periodic information to be delivered punctually, and for requests for information to be processed in several days.

As the necessary hardware was present at the time these procedures were instituted (both registration and grade processing were previously computerized), no substantial financial outlay was necessary. The cost of the services provided by the Computer Center to the Office of Graduate Admissions is about $2,000 per year, which is essentially the cost of computer time only. Because of the interactive nature of the information, and difficulty in judging staff time, this is additional. The cost of staff, of course, is the most expensive aspect, and cost is hidden in the total computer staff budget outlay.

Youngstown State University has developed an on-line computerized student record (information) system (at present, the Graduate School is not part of the system; a tie-in is

possible, as Youngstown State further develops graduate programs). Need for information, both institutional and extra-institutional, increased significantly after Youngstown became a state institution in 1967. The Computer Center at Youngstown State University was developed in 1968, with four primary objectives:

(1) As a comprehensive system, the Computer Center was to be a centralized operation, but with decentralized access.

(2) Terminal-oriented processing methods served as an important way of negating otherwise significant clerical increases.

(3) There were to be only a limited number of highly integrated data bases, capable of highly efficient random updating of any quantity of data.

(4) Administrative systems were to be given top priority in the YSU Computer Center. This was necessitated because of administrative underdevelopment and due to substantial and increasing informational needs.[94]

On-line entry to the system can be accomplished only through use of proper codes. Invalid entries are negated by computer editing, with invalid entries appearing on an error screen. The original data is displayed for verification because it is entered into the computer as a part of the permanent entry. Changes in student information are made using the "change function."[95]

Continual updating in the admissions process allows for dissemination of reports and statistics on applicants to the proper individuals, thereby expediting the decision-making process and allowing for increased communication between

coordinating areas in the University.[96]

To date, Youngstown State has fifty interactive terminals, three front-end mini-computers and one remote reader/printer station. Twenty-seven of the fifty interactive terminals are used for administrative purposes. Six additional interactive terminals, for administrative use, are budgeted for installation in 1978.[97]

This type of system allows, through centralization, ready access to all information on applicants and admitted students, minimizing duplication of effort in the various administrative units and departments.[98]

Microfiche reproductions are made at the end of each academic quarter. This provides a hard-copy addition to the student record on the computer, allowing the student, the administrative units, and the academic department updated transcripts, term by term.[99]

The cost of the system at Youngstown State University is significant, but it should be remembered that this system is comprehensive. Duties performed at present include:

(1) Registration.

(2) Grade reporting (grades are processed and mailed within 24 hours).

(3) Evaluating application forms.

(4) Tracking the process of application.

(5) Providing complete demographic data on students.

(6) Evaluating financial status, updating aid status.

(7) Billing; the financial aid status is always updated.

(8) Student evaluation of faculty.

(9) Library cataloguing, reference searching, and circulation.

(10) Personnel and payroll records.

(11) Equipment and furniture inventories.

(12) Collection of faculty service data.

(13) State reporting to the Ohio Board of Trustees.[100]

Under development are the following on-line systems or on-line versions of existing batch systems:

(1) Revision and publication of the University catalogue.

(2) Class grade testing.

(3) Questionairre evaluation.

(4) Student career planning.

(5) Purchasing, receiving, accounts receivable.

(6) Budgeting.[101]

> The university has employed roughly 9 programmers for each of the 9 years that it [the computerized information system] has existed, a total of 80 manyears of programming. This is an investment of approximately $1,200,000 in programming staff over the last 9 years. This investment includes all programming for academic and administrative on-line systems as well as for support systems which generate administrative batch reports. It also reflects the considerable systems programming time which has been invested in installing successive computers and operating systems.
>
> If $1,200,000 sounds like a high investment in software, it must be kept in mind that the annual operating costs of computer centers are high. Averaged over the 9 years in which this investment has been made, the University's costs for all programming have been only $130,000 per year. Compared to the $1,200,000 annual operating budget of the University's Computer Center, this investment in programming averages only 11% per year.
>
> Lest the conclusion be drawn that an on-line environment will be a high cost in the university's

> computing budget, it should be emphasized that terminal oriented on-line computing has been performed at Youngstown State University for the same or less cost than conventional methods of batch computing. Few people realize the conversion power that keypunch resources hold for a terminal environment. At today's Ohio Civil Service rates, a University keypunch operator and machine would cost about $10,000 per year. This continuing cost can be converted into 5-8 rented terminals (the University's average is 5½). Were the University running a batch processing system today, at least 6 keypunch operators and machines would be required at a cost of $60,000 per year. For less than $50,000, Youngstown State University has 27 interactive administrative terminals instead. This has been accomplished because existing personnel in offices which receive computer terminals are easily able to absorb the small amount of terminal operation which necessarily comes with the machine, reducing the on-line cost to that of machine rental.[102]

Drs. Ronald W. Jonas and James A Scriven, of Youngstown State continued in summarizing the experience of the University in relation to comprehensive computerized student records availability:

> In summary, four basic facts should be restated regarding on-line computing. First, any university which does not now have an on-line environment can create one. No organization was less experienced than Youngstown State University when it launched this approach. The cost of programming such an environment need not be costly if it is done in a deliberate fashion with careful planning.
>
> Secondly, it is not necessarily the case that on-line computing requires use of the telephone system to function. Even terminals designed only for telephone use can be connected by direct cable to the computer using a telephone simulator. Some terminals are now being designed, furthermore, to operate both through direct cable or telephone protocol, permitting a mixed environment. If terminals are to be installed in the same building with the main computer or if the buidings are in a reasonably compact ground space, terminals can be connected

> to the computer by cable. While most of this University's terminals are now wired through an underground utility tunnel, some cables are also installed through existing underground conduit, and a few are even hung through the air on utility poles.
>
> Thirdly, on-line computing generally implies more storage. Core memory is quickly taken over by terminal monitoring systems. Unless a university has access to large core memory or virtual operating systems which accomplish the same results, this can be the highest cost which must be covered in creating an on-line environment. As for the storage of data bases, random access memory is indespensible. This therefore rules out magnetic tape as a storage medium and makes disc or drum a prerequisite. Furthermore, as an organization becomes more accustomed to on-line computing, the demands for new functions, new items of data, and therefore more random access memory will grow. Fortunately, as this need grows, the need for mountable disc memory drops; and non-mountable disc or drum memory is becoming one of the most affordable commodities available.
>
> Last but not least, while the initial investment in programming manpower may be worrisome, the simplification and clerical savings which result from on-line processing should not be underestimated. The mere elimination of the keypunch department stops a large system of paperwork flow between the computer center and all the offices it serves. No longer must there be conferences about what particular papers contain or a resolution of errors between the computer center and the offices it serves. Data is entered by terminal in the offices where it originates, errors are resolved there by personnel who are familiar with the data, and the turnaround time for updating data reduces to seconds.[103]

Bowling Green State University* has had a computerized student records system for several years. The Graduate College at Bowling Green is part of a system much like that of Youngstown State University.

---

*The writer obtained the information during a visit to BGSU.

An on-line system available to various sectors of the University makes available to the Computation Services center information for computer update and maintainance. Information is readily available on individual students, on departments, or as a total overview of the Graduate College.

Periodic printouts are made available to the Graduate College in the following areas on a routine basis:

(1) Through the "Graduate Admissions File," on entering and applying students. The objective is to maintain current information on the applicant, in order that on-going communication may be established. As application material enters the Graduate College, the appropriate graduate advisor is forwarded information regarding the applicant. As graduate education becomes increasingly competitive in an entirely new sense, ie., colleges and universities in competition for students, it is imperative that each graduate department "sell" its good points. Even departments which are highly selective lose highly qualified students unnecessarily. An attempt must be made to attract qualified applicants and to ensure that a person-to-person communication is established with promising candidates. The computerized system at Bowling Green facilitates this person-to-person communication integral to the admissions process.

(2) Computerization of student information allows expedient access to information on any student. Updates are shown for GPA, standardized test scores, any Incompletes, graduate student admit status (regular or conditional),

financial aid from the University, etc. Updates are run immediately following each grade report.

(3) Computerized printouts, following each grade report, are made available on all students who have fallen--for one quarter or by cumulative credits--below a 3.0 GPA.

(4) Departmental profiles are made available each term as a cumulative overview of students, financial aid, etc., for each department.

(5) Monthly admissions data, by department, is computed. Thus, the Graduate College can have a fairly up-to-date overview of the number of applications to any department, the number of acceptances in each department, the names of those who have applied, been accepted, and denied admission.

(6) Presently being instituted is a listing, by quarter, of students who are degree candidates. Complete profiles are made available, including courses, GPA, admit status, and other pertinent data.

(7) Also being instituted at present is a listing of GRE and/or MAT scores for each student, for colleges, for departments, and cumulatively for the University. (Prior to this year, Bowling Green's Graduate College required no standardized testing for graduate-level students.)

It was suggested that, since Toledo has fewer graduate students on a full-time, continuous basis than does B.G.S.U., and more part-time and "on-again, off-again" students, there is greater need for sophisticated "tracking" of students' progress through graduate programs.

The cost of supplying the Graduate College with the

needed information was estimated from Computational Services records. A thorough inventory of records produced the following figures:

-Computational Services production runs for the Graduate College have, since September 1, 1977, averaged about $100 per month (this does not include B.G.S.U.'s Graduate College on-line capacity).

-Project account maintainance for the Graduate College averages about $50 per month. This is cost for personnel, and does not include computer time, which is estimated to be of only minimal expense on a monthly basis. Computer time is impossible to assess with any exactness, as the Graduate College is stipulated no specific amount of computer time in institutional budgeting; needs of the Graduate College vary throughout the year (need is heaviest in Fall of each year), and computer time is available only on an institution-wide basis.

Any such substantial computational development as that needed in the Graduate School of the University of Toledo would cost about $400 per month, prior to implementation of the complete package, as estimated for a computer center commensurate to that of Bowling Green. For a change-over on the level of the Toledo Graduate School's student records system, it was estimated that a service equal to that of B.G.S.U. Computational Services would take six to eight months.

CHAPTER V

EVALUATION AND PROPOSALS

Continuing, sound, and exacting evaluation, of which access to student records plays a large part, is warranted--providing institutional and disciplinary aims, ends, and functions are clearly understood--in order to satisfy a number of institutional and program needs, requirements, and objectives:

-In order to assure maintainance of high quality, or as an aid to indicate means by which to attain higher academic standards.

-In order to prepare for and to facilitate accreditation review.

-In order to allow comparison of any program to programs of a similar nature elsewhere.

-In order to ensure program viability in the institution, in terms of administrative, faculty, and student support.

-In order to determine whether administrative commitment to program development has been adequate.

-In order to justify budgetary outlay.

-In order to assist in determination of cost of program development, in terms of financial and human benefits.

-In order to allow for determination of the ultimate utility of a program, relating to interdisciplinary, institutional, and extra-institutional contribution and effect.

-In order to offer evidence of accomplishment to extra-

institutional bodies or persons who seek justification for past and/or present efforts, and seek institutional justification for projected or suggested future direction.

-In order to further aid in determination or reassessment of mission, policies, objectives and goals, so that self-knowledge may be present for unified institutional function.

The office of the graduate dean is a logical and central place for maintainance of readily accessible data and information on the graduate student population. It is not only a central location for storage, but is also the location for committee decision-making on graduate education. The graduate school can serve as a place for cooperative effort and understanding, just as it can--providing the means toward cooperation are not present--serve as a center for distrust and institutional division.

Just as evaluation can aid in clarification of objectives, goals, policies, and procedures, so evaluation can not proceed fairly without a meaningful and understood educational base. In order that institutional, program, and individual assessment may be impartial and proper, it is necessary that there exist a clear definition of institutional and disciplinary function. Otherwise, evaluation shall necessarily be defective and unjust, and perhaps appear to be arbitrary in method.

An administrator must be aware of intentions underlying program design and individual conduct, and of the extent of benefits to an institution and to the larger learning through

the unique character of the individual discipline. Evaluation necessarily involves evaluating individual and collective viewpoint; the basis for objectivity in review is an agreement on the scope, limits and nature of that which is to be evaluated. It must be presumed--in each case--that there is both implied and accepted a known set of values and an understood set of goals implicit in the evaluation process as central to established institutional and educational ends.

An administration must aid individual departments in establishment of priorities and policies for program development, such that perceived ends--and routes to those ends--may be instrumental in promoting disciplinary emphases consistent with managerial function and institutional purpose. Departments suffer--as do all aspects of higher education--from a lack of substantive articulation of educational objectives and ends. It is unfair to any department to attempt to function independent from the support of an intelligible institutional framework, as no educational program that is fundamental and lasting can exist and prosper maximally without apprehensible disciplinary and institutional standards, values, and objectives.

Furthermore, as no department can be "all things to all men," given limited human and financial resources, so no institution can provide all types of learning to all types and levels of interests and needs. It is obligatory that institutions which have not done so move beyond ambiguity in statements of mission and purpose, to more adequately discern priorities in concern for the institution as a complex and inter-

dependent entirety.

The changing role of the graduate dean is such that he or she is increasingly in need of more information. Like Miss Rosa Dartle, of David Copperfield (Ch. 20), he or she is likely to be found saying: "You know how ignorant I am, and that I only asked for information, but isn't it always so?" (Miss Rosa Dartle, no doubt as obscure to literature as is the graduate dean to many universities, was Mrs. Steerforth's companion.) Anyone criticizing the under-informed administrator (on some information-heavy issue) for suspect judgement, providing the lack of information is not the administrator's doing, might as well criticize the blind for not seeing, the deaf for not hearing, and the dumb for not speaking. Information is the administrator's "bread-and-butter"; without it, he is lacking the means of identifying and working with concerns of importance to the university. Error, or unrealized opportunity, is no less real for being unwitting. Without information essential to proper attention to an issue, a job done fairly well must be considered a job well done.

If our universities are not to become (providing they have not already become) the educational--or, vocational--supermarkets of the Twentieth Century; if we are not willing to see our administrators as new mercantile men and women; if we are not willing to allow a supply-and-demand (or, demand-and-supply), super-sized, ever quantifying but philosophically and educationally naive administration to dominate, then the institutional community should ensure: (1) that we choose

administrators who, through thoughtful perspective on education, seek to genuinely elevate thought and manner, as well as to arbitrate and regulate, and (2) that we give the individuals who can unify, relate, and act wisely and well on pressing issues, the necessary tools to do so. Otherwise, the growing complexity of higher education administration will further compel the retreat toward a personal and socially pernicious narrowness resulting in specialization, vocationalism, and ad hoc topicality. It must be assured that the American university not reflect the national condition; administrators, as faculty, must reach to an ever higher level of academic and educational standards, and must receive support to prepare the university for the future through responsible and viable commitment to a search for the means toward an increase in knowledge and learning.

The request for implementation of self-review is not new among graduate deans at the University of Toledo. For at least twenty-five years this need has been felt in graduate education. At present, demands suggest that there never has been a greater need for ready access to student and other information. Never before has demand for data and self-review been greater from extra-institutional persons and groups. The increasing emphasis on accountability requires a continuous monitoring of institutional needs, priorities, administrative officers, faculty, curricula, and students. Present efforts at program evaluation at Toledo are impressive; implementation of suggested means toward ready access to student

record information in the Graduate School would greatly compliment such efforts.

Lastly, specifically in reference to these pressing problems in the Graduate School student record organizational deficiencies, in financial and human terms, loss to students, faculty, program develcpment, organizational efficiency, and to the funding public can be demonstrated. Potential gains through change can also be expressed, but they can be expressed only in terms of complete institutional commitment of resources necessary for administrative efficiency and academic quality.

FOOTNOTES

[1] W. M. Sibley, "Acccuntability," The International Encyclopedia of Higher Education Editor-in Chief, Asa S. Knowles. (San Francisco: Jossey-Bass, In., Publishers, 1977), pp. 91-92.

[2]Geoffrey Lockwood, University Planning and Management Techniques ([Paris: Organisation for Economic Co-Operation and Development, 1972), pp. 1-15.

[3]Ibid., p. 16.

[4]American Association of University Professors, "Statement on Government of Colleges and Universities," AAUP Bulletin (Winter, 1966): 375-379.

[5]Robert MacVicar, "Innovations in Graduate Education," in Proceedings of the Twenty-Sixth Annual Meeting of the Midwest Conference on Graduate Study and Research ([n.p.]: Midwest Conference on Graduate Study and Research, 1970), p. 27.

[6]Victor E. Hanseli, "The Educational Leadership of the Academic Dean," Journal of Higher Educati[illegible] 37 (November, 1966): 421.

[7]Fred Harvey Harrington, "The Role of the Graduate Dean in Higher Education," in Proceedings of the Twenty-Third Annual Meeting of the Midwest Conference on Graduate Study and Research ([n.p.]: Midwest Conference on Graduate Study and Research, 1967), p. 3.

[8]John Wesley Gould, The Academic Deanship (New York: Teachers College, Columbia University), p. 23.

[9]Ibid., p. 39.

[10]Riley Hodges and Lee Hodges, "The Role of the Graduate Dean," Educational Record 56 (Winter, 1975): 40.

[11]Ibid.

[12]Ibid., pp. 40-41.

[13]Ibid.

[14]Gould, pp. 38-39.

[15]R. E. Porreco, The Position of the Graduate Dean in Times of an Austerity Budget (Washington, D.C.: Council of Graduate Schools in the United States, December 1970), pp. 3-6.

[16]David R. Deener, "Program Development, Improvement and Pruning: A View From the Inside," in Proceedings of the Twenty-Seventh Annual Meeting of the Midwest Conference on Graduate Study and Research ([n.p.]: Midwest Conference on Graduate Study and Research, 1971), p. 34.

[17]Hanseli, p. 425.

[18]Gould, pp. 11-12.

[19]Ibid., pp. 10-11.

[20]Ibid., pp. 11-12.

[21]Ibid., p. 25.

[22]Gene A. Budig and Stanley G. Rives, Academic Quicksand: Some Trends and Issues in Higher Education (Lincoln, Nebraska: Professional Educators Publications, Inc., 1973), pp. 29-50.

[23]Norman H. Cohn, "The Multi-Headed Dean: Hydra or Hercules?" in Proceedings of the Twenty-Eighth Annual Meeting of the Midwestern Association of Graduate Schools ([n.p.]: The Midwestern Association of Graduate Schools, 1972), p. 71. Formerly the Midwest Conference on Graduate Study and Research.

[24]Hanseli, p. 427.

[25]MacVicar, p. 25.

[26]Hanseli, p. 428.

[27]Gould, pp. 77-78.

[28]John D. Millet, An Outline of Concepts of Organization, Operation, and Administration for Colleges and Universities ([ ]: Academy for Educational Development, Management Division, February 1974), pp. 11-12.

[29]John K. Major, "Self-Evaluation of Graduate Programs," in Proceedings of the Twelfth Annual Meeting of the Council of Graduate Schools in the United States ([n.p.): Council of Graduate Schools in the United States, n.d.), p. 109.

[30]Michael J. Pelczar, Jr., "Systematic Review of Graduate Programs," in Proceedings of the Twenty-Seventh Annual Meeting of the Midwest Conference on Graduate Study and Research ([n.p.]: Midwest Conference on Graduate Study and Research, 1971), pp. 10-11.

[31]Major, p. 109.

[32]Ibid.

[33]Ibid., p. 110.

[34]Southern Regional Education Board, Planning for Statewide Program Approval and Review, Issues in Higher Education No. 11 (Atlanta: Southern Regional Education Board, 1977), p. 3.

[35]Ibid., pp. 3-4.

[36]Ibid., p. 4.

[37]Lenore Heaphey, The Accountability Challenge to Higher Education, The S.U.N.Y. Experience Reproduced from Comment 2 (July, 1975): 2-6. (E.R.I.C., ED 111 270)

[38]Ibid., pp. 7-8.

[39]Southern Regional Education Board, p. 4.

[40]Richard R. Perry and Douglas A. Lind, "Criteria Warranted for Program Evaluation of Academic Programs at the University of Toledo," ed. Robert H. Fenske in Conflicting Pressures in Postsecondary Education (Tallahassee: Association for Institutional Research, 1977), pp. 19-25. Proceedings of the 16th Annual Forum of the Association for Institutional Research, 1977. (E.R.I.C. ED 145 745)

[41]Mary Jo Clark, "The Meaning of Quality in Graduate and Professional Education," in Scholars in the Making: The Development of Graduate and Professional Students (Cambridge, Massachusetts: Ballinger Publishing Company, 1976), pp. 85-104.

[42]Ibid., pp. 97-98.

[43]Lyle V. Jones, "Self-Evaluation of Graduate Programs," in Proceedings of the Twelfth Annual Meeting of the Council of Graduate Schools in the United States ([n.p.]: Council of Graduate Schools in the United States, n.d.), pp. 110-114.

[44]Edward A. Suchman, "Evaluating Educational Programs," in Readings in Evaluation Research (New York: Russell Sage Foundation, 1971), pp. 43-48. Reprinted from The Urban Review 3 (February, 1969), pp. 15-17.

[45]Samuel C. Webb, "Self-Evaluation of Graduate Programs," in Proceedings of the Twelfth Annual Meeting of the Council of Graduate Schools in the United States ([n.p.]: Council of Graduate Schools in the United States, n.d.), p. 117.

[46]Joseph Ben-David, David Blackwell, Herman Branson, et. al., Graduate Education: Purposes, Problems, and Potential (Washington, D.C.: National Board on Graduate Education, November, 1972), p. 17. (E.R.I.C. ED 070 413)

[47]Ibid, pp. 2-3.

[48]Paul L. Dressel, "Evaluation," The International Encyclopedia of Higher Education Editor-in-Chief, Asa S. Knowles (San Francisco: Jossey-Bass, Inc., Publishers, 1977), p. 1490.

[49]Ibid.

[50]Frederick E. Balderston, "The Design and Uses of Information Systems," in Evaluating Institutions for Accountability (San Francisco: Jossey-Bass, Inc., Publishers, Spring, 1974), pp. 51-52.

[51]Jack L. Franklin and Jean H. Thrasher, An Introduction to Program Evaluation (New York: John Wiley & Sons, 1976), pp. 206-207.

[52]Lynn W. Lindeman, "Why Faculty Object to Accountability in Education," Liberal Education 60 (May, 1974): 175-179.

[53]Francis E. Rourke and Glenn E. Brooks, The Managerial Revolution in Higher Education (Baltimore: Johns Hopkins Press, 1966), pp. 8-15.

[54]Ibid., p. 37.

[55]Earl F. Cheit, "Challenges Inherent in the Systematic Approach," Appraising Information Needs of Decision Makers. Issue Editor Carl R. Adams (San Francisco: Jossey-Bass, Inc., Publishers, 1977), p. 67.

[56]C. Robert Pace, Evaluating Higher Education ([Tucson]: Higher Education Program, College of Education, University of Arizona, July, 1976), pp. 8-10.

[57]Ibid., p. 1.

[58]Ibid., pp. 1-20.

[59]Bradley H. Sagen, "Evaluation of Performance Within Institutions," in Evaluating Institutions for Accountability, p. 72.

[60]Ibid.

[61]Peter H. Rossi, "Evaluating Educational Programs," Readings in Evaluation Research, pp. 98-99. Reprinted from The Urban Review 3 (February, 1969).

[62]Sagen, pp. 72-74.

[63]Oscar T. Lenning, "Better Program Evaluation: How Can We Meet the Concerns of Today Which Will Become the Imperatives of Tomorrow?" in Tomorrow's Imperatives Today ([n.p.]: The Association for Institutional Research, 1973), pp. 34-38.

[64]Adrian H. Harris, "The Comparability Question: Potential Uses and Misuses of Data," in Tommorrow's Imperatives Today, p. 106.

[65]Ibid., pp. 103-105.

[66]Ibid., p. 106.

[67]Joseph Ben-David, Herman R. Branson, et. al. Federal Policy Alternatives Toward Graduate Education (Washington. D.C.: National Board on Graduate Education, January 1974), pp. 100-101.

[68]Ibid.

[69]Felix M. Lopez, "Accountability in Education," Phi Delta Kappan 52 (December, 1970): 231-233.

[70]Ibid., pp. 231-232.

[71]Arthur D. Browne, "The Institution and the System: Autonomy and Coordination," in Long-Range Planning in Higher Education ed. Owen A. Knorr (Boulder, Colorado: Western Interstate Commission for Higher Education, April 1965), pp. 39-41.

[72]Ibid., p. 41.

[73]Ibid, pp. 42-44.

[74]Ibid., p. 43.

[75]Ibid., pp. 44-47.

[76]Balderston, pp. 47-65.

[77]Ibid., p. 65.

[78]Sibley, pp. 95-96.

[79]John J. Turin, in a letter addressed to Dr. James Q. Dealey, March 12, 1953. From the John J. Turin file, University of Toledo (Carlson Library) Archives.

[80]Alfred F. Foster, Graduate Education at the University of Toledo. Report printed April, 1969. From the William Carlson papers, University of Toledo (Carlson Library) Archives.

[81]William Muckenhirn, et. al. Report of Master Plan on Graduate Education, pp. 9-10. From the Graduate School file, University of Toledo (Carlson Library) Archives.

[82]Ibid., pp. 13-14.

[83]Gaither, Ibele, and Sussman. Report of a Visit to the University of Toledo for the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools, pp. 6-7. Report filed June, 1977.

[84]Ibid., pp. 9-10.

[85]Ibid, p. 12.

[86]John Caffrey and Charles J. Mosmann, Computers on Campus, a Report to the President on their Use and Management (Washington, D.C.: American Council on Education, 1967), pp. 6-8.

[87]Charles J. Mosmann, Academic Computers in Service (San Francisco: Jossey-Bass, Inc., Publishers, 1973), pp. 7-8.

[88]Chester O. McCorkle, Jr., "Information for Institutional Decision Making," in Appraising Information Needs of Decision Makers, pp. 1-2.

[89]Paul D. Fistori, et. al. "Computerization of Transcripts," College and University 51 (Summer, 1976): 607.

[90]Caffrey and Mosmann, pp. 40-41.

[91]Fistori, et. al., pp. 608-609.

[92]Raymond Keller, et. al. "A Comprehensive Information System," College and University 50 (Summer, 1975): 411.

[93]Fistori, et. al., pp. 608-609.

[94]Ronald W. Jonas, James A. Scriven, et. al. "An On-Line Terminal-Directed Student Information System," College and University 50 (Summer, 1975):390-391.

[95]Ibid.,pp. 397-398.

[96]Ibid., pp. 398-400.

[97]Ronald W. Jonas and James A. Scriven, "An Integral Data System, Youngstown State University," April 1968, p. 2. Paper presented at the 64th Annual Meeting of the American Association of Collegiate Registrars and Admissions Officers. Obtained compliments of the authors.

[98]Ibid., pp. 12-13.

[99]Ibid., p. 13.

[100]Ibid.

[101]Ibid.

[102]Ibid., pp. 13-14.

[103]Ibid., pp. 14-15.

SELECTED BIBLIOGRAPHY

American Association of University Professors. "Statement on Government of Colleges and Universities." AAUP Bulletin (Winter 1966): 375-379.

Balderston, Frederick E. Federal Policy Alternatives Toward Graduate Education. Washington, D.C.: National Board on Graduate Education, January 1974.

----------. "The Design and Use of Information Systems." In Evaluating Institutions for Accountability, pp. 47-66. San Francisco: Jossey-Bass, Inc., Publishers, Spring 1974.

Ben-David, Joseph; Blackwell, David; Branson, Herman, et. al. Graduate Education: Purposes, Problems, and Potential. Washington, D.C.: National Board on Graduate Education, 1972. (E.R.I.C. ED 070 413)

Browne, Arthur D. "The Institution and the System: Autonomy and Coordination." In Long-Range Planning in Higher Education, pp. 39-52. Edited by Owen A. Knorr. Boulder, Colorado: Western Interstate Commission for Higher Education, April 1965.

Budig, Gene A., and Rives, Stanley G. Academic Quicksand: Some Trends and Issues in Higher Education. Lincoln, Nebraska: Professional Educators Publications, Inc., 1973.

Caffrey, John, and Mosmann, Charles J. Computers on Campus, A Report to the President on their Use and Management. Washington, D.C.: American Council on Education, 1967.

Cheit, Earl F. "Challenges Inherent in the Systematic Approach." In Appraising Information Needs of Decision Makers, pp. 57-77. Edited by Carl R. Adams. San Francisco: Jossey-Bass, Inc., Publishers, 1977.

Cohn, Norman H. "The Multi-Headed Dean: Hydra or Hercules?" In Proceedings of the Twenty-Eighth Annual Meeting, pp.70-72. [n.p.]: Midwest Association of Graduate Schools, 1972.

Deener, David R. "Program Development, Improvement and Pruning: A View from the Inside." In Proceedings of the Twenty-Seventh Annual Meeting, pp. 30-34. [n.p.]: Midwest Conference on Graduate Study and Research, 1971.

Dressel, Paul L. "Evaluation." In The International Encyclopedia of Higher Education, pp. 1480-1493. Editor-in-Chief Asa S. Knowles. San Francisco: Jossey-Bass, Inc., Publishers, 1977.

Fistori, Paul D., et. al. "Computerization of Transcripts." College and University 51 (Summer 1976): 607-611. From the Proceedings of the 62nd Annual Meeting of the Association of Collegiate Registrars and Admissions Officers.

Foster, Alfred F. "Graduate Education at the University of Toledo." Report printed April 1969. From the William Carlson papers, University of Toledo (Carlson Library) Archives.

Franklin, Jack L., and Thrasher, Jean H. An Introduction to Program Evaluation. New York: John Wiley & Sons, 1976.

Gaither, Mary E.; Ibele, Warren E.; and, Sussman, Alfred S. "Report of a Visit to the University of Toledo for the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools." Report filed June 1977.

Gould, John Wesley. The Academic Deanship. New York: Teachers College, Columbia University, 1964. Published for the Institute of Higher Education, Columbia University.

Hanseli, Victor E. "The Educational Leadership of the Academic Dean." Journal of Higher Education 37 (November 1966): 421-428.

Harrington, Fred Harvey. "The Role of the Graduate Dean in Higher Education." In Proceedings of the Twenty-Third Annual Meeting, pp. 1-4. [n.p.]: Midwest Conference on Graduate Study and Research, 1967.

Harris, Adrian H. "The Comparability Question: Potential Uses and Misuses of Data." In Tomorrow's Imperatives Today, pp. 103-107. [n.p.]: The Association for Institutional Research, 1973.

Hodges, Riley, and Hodges, Lee. "The Role of the Graduate Dean." Educational Record 56 (Winter 1975): 39-41.

Jonas, Ronald W., and Scriven, James A. "An Integrated Data System, Youngstown State University." April, 1978. Paper presented at the 64th Annual Meeting of the American Association of Collegiate Registrars and Admissions Officers. Obtained compliments of the authors.

Jonas, Ronald W.; Scriven, James A.; et. al. "An On-Line Terminal-Directed Student Information System." College and University 50 (Summer 1975): 389-410. From the Proceedings

of the 61st Annual Meeting of the Association of Collegiate Registrars and Admissions Officers.

Jones, Lyle V. "Self-Evaluation of Graduate Programs." In Proceedings of the Twelfth Annual Meeting, pp. 110-114. [n.p.]: Council of Graduate Schools in the United States, 1972.

Keller, Raymond, et. al. "A Comprehensive Information System." College and University 50 (Summer 1975): 411-412.

Lenning, Oscar T. "Better Program Evaluation: How Can We Meet the Concerns of Today Which Will Become the Imperatives of Tomorrow?" In Tomorrow's Imperatives Today, pp. 34-38. [n.p.]: The Association for Institutional Research, 1973.

Lindeman, Lynn W. "Why Faculty Object to Accountability in Education." Liberal Education 60 (May 1974): 175-179.

Lockwood, Geoffrey. University Planning and Management Techniques. [Paris]: Organisation for Economic Co-Operation and Development, 1972.

Lopez, Felix M. "Accountability in Education." Phi Delta Kappan 52 (December 1970): 231-235.

McCorkle, Chester O. "Information for Institutional Decision Making." In Appraising Information Needs of Decision Makers, pp. 1-10. Edited by Carl R. Adams. San Francisco: Jossey-Bass, Inc., Publishers, 1977.

MacVicar, Robert. "Innovations in Graduate Education." In Proceedings of the Twenty-Sixth Annual Meeting, pp. 22-27. [n.p.]: Midwest Conference on Graduate Study and Research, 1970.

Major, John K. "Self-Evaluation of Graduate Programs." In Proceedings of the Twelfth Annual Meeting, pp. 108-110. [ ]: Council of Graduate Schools in the United States, 1972.

Millet, John D. An Outline of Concepts of Organization, Operation, and Administration for Colleges and Universities. [ ]: Academy for Educational Development, Manpower Division, February 1974.

Mosmann, Charles J. Academic Computers in Service. San Francisco: Jossey-Bass, Inc., Publishers, 1973.

Muckenhirn, William, et. al. "Report of Master Plan on Graduate Education." March 1974. From the Graduate School file, University of Toledo (Carlson Library) Archives.

Pace, C. Robert. Evaluating Higher Education. [Tucson]: Higher Education Program, College of Education, University of Arizona, July 1976.

Pelczar, Michael J. "Systematic Review of Graduate Programs." In Proceedings of the Twenty-Seventh Annual Meeting, pp. 9-15. [ ]: Midwest Conference on Graduate Study and Research, 1971.

Perry, Richard R., and Lind, Douglas A. "Criteria Warranted for Evaluation of Academic Programs at the University of Toledo." In Conflicting Pressures in Postsecondary Education, pp. 19-25. Edited by Robert H. Fenske. Tallahassee: Association for Institutional Research, 1977. From the Proceedings of the 16th Annual Forum of the Association for Institutional Research, 1977. (E.R.I.C. ED 145 745)

Porreco, R.E. The Position of the Graduate Dean in Times of an Austerity Budget. Washington, D.C: Council of Graduate Schools in the United States, December 1970.

Rossi, Peter H. "Evaluating Educational Programs." In Readings in Evaluation Research, pp. 43-48. Edited by Francis G. Caro. New York: Russell Sage Foundation, 1971. Reprinted from The Urban Review 3 (February 1969): 15-17.

Rourke, Francis E., and Brooks, Glenn E. The Managerial Revolution in Higher Education. Baltimore: The Johns Hopkins Press, 1966.

Sagen, Bradley H. "Evaluation of Performance Within Institutions." In Evaluating Institutions for Accountability, pp. 67-80. San Francisco: Jossey-Bass, Inc., Publishers, 1974.

Sibley, W. M. "Accountability." In The International Encyclopedia of Higher Education, pp. 90-96. Editor-in-Chief Asa S. Knowles. San Francisco: Jossey-Bass, Inc., Publishers, 1977.

Southern Regional Education Board. Planning for Statewide Program Approval and Review. Issues in Higher Education No. 11. Atlanta: Southern Regional Education Board, 1977.

Suchman, Edward A. "Evaluating Educational Programs." Readings in Evaluation Research, pp. 43-48. Edited by Francis G. Caro. New York: Russell Sage Foundation, 1971. Reprinted from The Urban Review 3 (February 1969): 15-17.

Turin, John J. Copy of a letter addressed to Dr. James Q. Dealey, March 12, 1953. From the John Turin file, University of Toledo (Carlson Library) Archives.

Webb, Sam C. "Self-Evaluation of Graduate Programs." In Proceedings of the Twelfth Annual Meeting, pp. 114-117. [n.p.]: Council of Graduate Schools in the United States, 1972.